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We Send Them to College– to Be Confused

By PETER A. BERTOCCI

The Dangers of Knowledge without the Safeguard of Self-Direction

ALMOST any discussion of modern education assumes that the main objective must be preparation for life. But agreement disappears and controversy becomes lively when attempts are made to discover the program needed to realize this goal. One educational Utopia after another is received for consideration and analysis, while, in the meantime, educational policy is in reality determined by implacable, nonrational forces. We continue, nevertheless, to send our students to college to "prepare for life," and the colleges continue to prepare them for life; but neither parents, colleges, nor students seem to have a definite idea of the means to, and the nature of, that life for which the student is to be prepared.

The causes for this derangement are not easily fathomed, since they are part of a complicated nexus of economic, social, and intellectual forces. No sooner is one's finger laid upon a cause for certain educational trends than someone points out that this cause is really the effect of another situation, and so on. Nevertheless, it does seem that considerable confusion would be avoided if the college of liberal arts, to which this discussion will be confined, adjusted its method of procedure to fit the needs of those who enter it.

As Plato and Aristotle long ago reminded men, the method used in any field of human effort should depend on the nature of the subject-matter to which it is applied, for the adequacy of a method will depend on its ability to compass and illuminate, without distortion, the problem confronted. After all, one does not employ the same kind of hook or net to catch all fish. Accordingly, to be

effective, the liberal-arts college must always be acutely aware of what is going on in the student's experience and take account of the effects of his liberal-arts education in particular. Before attempting even a brief analysis of some of these effects, we must first appreciate the psychological state of the normal student.

The college student is in the later stages of adolescence, a period fairly described thus by Edmund A. Conklin:

> It is a period of leaving school, of breaking away from parental domination, of vocational selection and adjustment, of establishing self-reliance and self-responsibility in conduct; it is the period of sexual restraint in the years between sexual maturation and the age when marriage is approved; it is the period . . . in which religion plays a large and often changing function in life; and it is above all a period of social adjustment, one in which the social situation has perhaps a larger influence upon the personality pattern than at any other time of life. It is a period so freighted with problems and possibilities as to make it a most critical period of growth.[1]

It is in adolescence that the girl or boy who has completed girlhood and boyhood adjustments to life finds himself once more in a world of change, all the way from the physiological to a change of world perspective. A new insecurity threatens him, and a new search for security, recognition, and independence begins. In the economic and social flux, with the shifting of some landmarks and the discrediting of others, the adolescent is all the more confused and upset. Nor is he assured by the plight of his father, who may himself be having difficulty in his adjustment to new and unexpected events. The resulting insecurity and lack of motivation in the adolescent are not surprising. A plan of life seems incapable of realization, and hence plans go by the board. Nor is it a wonder that the youth desirous of recognition and achievement is glad to enlist in any enterprise which promises security and gives him something for which to live: witness the youth of Italy, Germany, and Russia.

What happens, then, to our normal adolescent when he enlists in the usual liberal-arts college? Does college training give him a sense of direction, a feeling of security, a belief in the importance and significance of his world, nay more, of the cosmic process in which he is involved? Does he leave college with better tools for accomplishment, but not knowing what is really worth accomplishing?

AS THE adolescent begins to feel the effects of the college of liberal arts, he discovers that it prides itself on teaching students to think, to develop critical acumen. He must now criticize and re-evaluate the knowledge of the world and of man. The traditional and conventional must be tried at the bar of reason and have their credentials approved. This is a worthy justification of the liberal-arts college provided its task is thoroughly done. Yet, though thinking may lead to ultimate satisfaction, it is by its very nature a process involving suspense, insecurity, and doubt. Furthermore,

[1] *Principles of Adolescent Psychology*. New York: Henry Holt and Company, 1935. p. 2.

analytic thinking, in any one realm of nature or in all, leads to exaggeration of some part unless it is supplemented by synthesis, by seeing the parts in their relations to each other and as a whole. The question, then, as we review briefly the program offered by the college is: To what kind of mental and emotional experience is the student introduced?

The physical and biological sciences constitute an appropriate part of the training in this type of college. Through the study of the natural sciences, the adolescent learns about the rigidity of scientific method, and it may be with something of a shock that he comes to realize that knowledge of immaterial realities, including the biological, cannot boast of equal scientific certainty. The struggle for certainty in knowledge is so real, he finds, that even if he should master his own mind, he would still be asking for intellectual security nowhere to be found. But of even more import is his discovery, as he studies the natural sciences, that the world in which he lives is far different from that previously envisioned. The universe of good, hard stuff, comprehensible miles in length, and constituted by small particles becomes a universe of swarming electrical energies, impossible to imagine, extended not miles but light-years into space. In studying the astronomical realm, the student must himself experience a super-Copernican revolution, for now his world is not only one of the smallest planets revolving about the sun, but his whole solar system is only one of myriads. Indeed, awe-struck, he is further amazed by the discovery of his own quantitative and temporal insignificance, and of the running down of energy which will one day freeze man and his long-cherished ideals to death. It is not difficult to see, therefore, why the reflective student might well turn from the microscopic and telescopic realms with a sense of futility, and certainly with no increase of security.

Let him now seek relief and encouragement in the biological realm. Here he is told of the struggle for life and of the survival of the fittest, of nature red in tooth and claw, of the ascent of man through generations of slow development. Man, he may once have thought, was the king of creation, the special product of God, but now he seems to be the king of the animals, his prerogatives resting on a better and more complicated receiving and reacting organism. All in all, man seems to be a curious type of cosmic accident.

NOR does the college student find assurance in the study of history. The study of the rise and fall of civilizations, of the development, status, and problems of his own, does not leave him with a sense of permanence. Indeed, history, by no means excluding that of the present day, may well seem to be a progressive preparation for death as well as for life; the predatory instincts of mankind do not seem to be yielding to the persuasion of reason and love, while fear, well evidenced by the size of fleets and air squadrons, has characteristically blinded all nations to anything but the immediate future. All in all, the development of mankind politically and economically may

well leave the open-eyed collegiate with two grave questions: Will he be able to get a position, and plan with reasonable confidence a career and a family whose security will not be undermined by another depression in about fifteen years? Or, worse yet, is he destined to be blown in a hundred directions by a bursting shell or to be mangled under a merciless fire-spitting tank? It is this kind of reflection which paralyzes planned action and rational foresight and tends to make the college student a victim of the get-rich-quick or wine-women-song variety of action. Does he not see about him a loss of faith in the orderliness of economic returns for labor and energy given? After all, it is only in a world and country where men have lost their hope of making a decent livelihood by means of the week's pay that gambling can flourish, as it does, for example, in our so-called "nigger pool" and racing crazes. Men and nations are thinking of immediate self-protection, trust is based on a system of oath-taking, jobs in our school systems as well as in politics seem to depend on "connections" rather than merit. Why, in a world like this, try except to make a "connection," or get in "on the inside"? What is another man, that we be mindful of him?

If the student turns to psychology, to the study of the experiential process, intellectual, physiological, and emotional, which underlies human behavior, he may indeed discover that reason, though it may serve to give objectivity and direction to life, is usually a means of rationalizing and rendering respectable emotional bias and prejudice. In spite of Aristotle's insistence that man is a rational animal, an inspection of the species in the large shows that actually he is a rationalizing animal, easily swayed by emotions which enslave liberating reason. It is this creature who is easily and thoroughly victimized by the propagandist. No, as he studies psychology, the student is given neither assurance nor confidence in an enlightening conscience, the voice of God within him, on which he may depend for guidance. He finds, rather, that though man has plasticity and potentiality denied the rest of creation, he may, nevertheless, develop emotional, physical, and intellectual habits which destroy the harmony of his life and render him unfit for sane and satisfactory achievement.

Let the student once more seek direction, perhaps in the study of sociological institutions. Again his world is dynamited. The standards which he had perhaps taken for granted as being the only possible or correct ones, the conventions and customs and institutions handed on to him are now subjected to analysis which often reveals them to be built not on rocks but on shifting dunes. Alternative cultural standards and institutions, ranging from marriage to the economic system, force the questioning student to ask: Are right and wrong, then, only matters of opinion? Is there any absolute truth as to conduct? Is flux king, or are there permanent laws of human satisfaction which human institutions embody and subserve? Are there any final institutions which will ensure lasting happiness for man?

These are questions which the college youth must answer if he has understood and thought about the subject-matter which has been presented in the descriptive sciences. I am not urging that these are the only questions, nor that every college student asks them; but I do insist that these questions are inherent in the subjects, and that the total effect is a further unsettlement, an added confusion. And if the adolescent, now driven to the important quest of what is really worth while, seeks a solution in the very studies which have wrought the disturbance, he is doomed to disappointment. For none of these sciences are, as such, interested in the criterion of human values, and, in so far as the student is immersed in the descriptive sciences alone, he finds no enlightenment as to the goals of his life. The natural, biological, and social sciences do indeed help him to classify himself in relation to the rest of the world, and they do suggest questions as to the meaning of existence, but in them alone no answer to these problems is to be found. The student, consequently, is left with perplexities which need to be resolved if he is to act rationally and courageously, and, in the long run, effectively.

THE crucial question, therefore, is: Does the college of liberal arts have an adequate method of dealing with the problems which the very process of education has evoked? Does its method, as expressed in the curriculum, rout confusion or reduce it, or does it lead to an actual evasion of these problems?

We find our answer in the fact that though descriptive courses are many and required, both in theory and practice, courses whose aims are the examination of standards of truth, beauty, and goodness are actually optional and relatively few. The former are "musts"; the latter are "mays." For purposes of this essay, we shall not discuss the contribution of courses in literature, though it may be said that these, in general, lie midway between the descriptive and the normative. Their main aim, probably, is to refine the student's taste for literature; they lie largely in the category of the aesthetic, and hence join the descriptive courses in abstracting themselves from the problem: How, and for what, shall I live? To be sure, literature may be so taught that the issues of life may be meaningfully clarified; yet, ultimately, for a careful and thorough answer one must turn to ethics and the philosophy of religion especially, both of which disciplines are aided by the discoveries of the sciences as they proceed to delineate the ultimate values of life and the grounds for their cosmic foundation. But philosophy, ethics, the philosophy of religion are notable for their presence among the avoidable courses, in fact, are frequently missing in the program of the college of liberal arts.

What this means specifically, regardless of what the explanation may be, is that our liberal-arts colleges are satisfied to describe life and to raise problems, but perfectly willing to leave systematic thought about them to the discretion of the student, who frequently settles them on an uncritical level. This college prescribes

systematic knowledge of nature, life, and social institutions, but it does not demand that the student think systematically about the goals of living. It compels a knowledge of the actual but leaves that which ought to be to individual taste. Hence, at the critical point, after having raised the questions, after insisting on the criticism of tradition in every field, the liberal-arts college leaves the adolescent to fare for himself. It may well be that the cause of this curious neglect is to be found in the hit-or-miss educational development which produced the present system, but is it not time for us to transform our procedure to meet basic requirements of the present and the future? Can we continue to muddle along with clear conscience? One thing is assured, that if we do continue to make spinach optional and scarce, the students who will make it even a small part of their diet are few indeed. They, too, will muddle along and answer their questions by the trial-and-error methods of everyday life; their ethics will arise from the exigencies of many practical, immediate situations, rather than from any consideration of how a plan of life may be realized by means at their disposal. The purpose of education is to make possible the progress of life by the avoidance of silly errors on the part of the individual who has learned to profit from the experiments of the race in various realms of endeavor. For this reason we teach him science. Is it not, therefore, for this reason also that the liberal-arts college must teach him to avoid the mistakes of loose thinking about the goals of life? Indeed, is not modern education guilty of loss of perspective in its underemphasis on the education of will and emotion?

OF COURSE, one may rightly insist that knowledge is not virtue, but may one logically and empirically disagree that virtue involves knowledge? The college of liberal arts will not necessarily improve the student by emphasizing and requiring more study of the normative sciences, but no one in living contact with the college student can deny that many of his problems may be more adequately approached by greater insight into the principles of effective and satisfactory living. Indeed, have we not been robbed of our courage by the thought, for which there is less basis than is supposed, that it is after all so difficult to get unanimity of opinion on questions of religion and ethics? As a matter of fact, has not the disagreement been caused to a considerable extent by the confused and insufficiently critical thinking of even those who have gone through our educational process? If it is the purpose of the college to pierce the fog with light on important questions, do we not add darkness to fog by giving in to the admitted difference of opinion? Where there is disagreement, there is need for further thought—greater concentration, not less.

Some may urge: Should not these questions be left to the family and to the church? That they have been left to these institutions is true, but there are serious grounds for holding

that they may not and should not be left to either the family or church alone. There certainly is no more reason for leaving ethical and religious knowledge entirely to the parents than there is for leaving knowledge of the physical or biological or sociological world to them. We teach the son of the mechanic general principles of physics which his father cannot teach him, and we do so in order that he may learn to master a larger number of physical problems. But we suppose, evidently, that the father and mother of good but simple habits will be able to throw light on the increasing complexities of their children's moral lines. We are naïve enough to assume that they are expert moral teachers, capable of interpreting moral principles in a world of changing needs and conflicts. Now there are parents who can do this, but it is doubtful if there is a significant minority who are, in the first place, conscious of the principles by which they themselves are living, or, second, capable of teaching such principles to their children. Indeed, in a time of especially rapid change, how can we reasonably expect parents to deal with problems arising out of the new world to which the college has introduced the student?

Our failure to realize and face these facts has led to a situation in which the student, sent to college to become better prepared to meet the problems of personal and civic life, is graduated from college with sufficient knowledge of a more complex world to upset the values he had as a Freshman but with no clearer light as to the nature of the new values to which he must dedicate his life. Nor can we delude ourselves into believing that our student can evade betting his life on a set of values; as long as he lives his wager must be made on one group of values or another. But the laying of the bet without a critical knowledge of what is at stake is avoidable only if the college will wake up to its problem and insist on a careful consideration of philosophies of life. As things stand, well-intentioned parents and adolescents content themselves with meeting everyday needs as they come, and it is not surprising that moral sensitiveness and foresight in the presence of new personal, communal, national, and international situations are conspicuously lacking.

MAY not these problems of moral guidance be left to the church? Hardly, for even if the church did teach all of our college students, no person looking realistically at most of our churches can turn the student over to them for adequate guidance. The problem calls for more systematic work than churches at present can offer, owing to financial obstacles and to the heterogeneity of membership. Once more, the difficulties of the college student arise at a different level, a level created by his college studies because of the lack of balance between the descriptive and the normative curriculum, between the natural, biological, and social sciences, on the one hand, and ethics, aesthetics, religion, and metaphysics, on the other. To pass the student to the church is simply "to pass the buck." The questions of the college student must be answered at a different level

from that of the average layman. If we ask our student to criticize and evaluate scientific, economic, social, and historical knowledge, should we not insist that he spend enough of his time in constructing, under supervision and guidance, a philosophy of life?

To be sure, the treatment of religious problems in college confronts difficulty, by virtue of the presence of various denominational faiths; but the philosophy of religion here envisioned does not deal with the elucidation of Christianity, or Judaism, or Mohammedanism, but rather deals with the fundamental postulates of all religions, leaving for further consideration the question of which particular historical faith best fulfills the emotional and intellectual needs of man. Such a course must be a prescribed part of the curriculum if the college of liberal arts is to deal with the needs which it evokes, in so far as it is successful with the remainder of its teaching.

But if there is any protest to prescribed work in the philosophy of religion, less ground for objection certainly can be found to our insistence that a careful study of theoretical and practical ethics, involving, perhaps, the study of social philosophy, shall be a requirement of the program of liberal arts. For here the need is supremely evident. The adolescent comes to college with uncriticized moral principles or habits. In college, if he has been thinking, he may well have questioned the validity and value of some of the conventional and accepted moral standards. Is he to leave college with better principles of which he is conscious and which can withstand opposition? In any case, must not the college of liberal arts insist that the student issue from college with a life plan which has been criticized from the viewpoint of its fundamental aims?

In a world in which it becomes increasingly difficult to distinguish right from wrong, the liberal-arts college surely fails to meet its obligation of preparing adolescents broadly for the life of achievement unless it demands that they have clearer ideas about the moral experience of the race of man. It cannot continue to send forth students versed in the techniques for living but relatively ignorant as to the aims of life. It must contend, rather, that of all the knowledge of mankind the systematic scrutiny of ideals and values constitutes the minimum requirement of the educated man. In a word, the college of liberal arts must rise to its responsibility and endeavor consciously to educate students who can look upon the changes of their own day with the perspective of those who have knowledge of the sources of the higher values of life, students who can lead in the struggle for a higher type of existence by virtue of their superior knowledge of the more significant aims and values of existence. The college of liberal arts plays a large part in the preparation of students for those professions which will make or break the community and the nation, for it provides basic foundations for the professions of teaching, law, medicine, social service—yes, of fatherhood and motherhood. Of all colleges, can the liberal-arts college afford any longer to leave courses in the direction of life an optional matter?

A Serious Charge

By W. W. CHARTERS

Education Neglects Its Fundamental Bases

HISTORICAL movements have a way of growing regularly for long periods of time, and then, with the injection of a new concept, a period of rapid growth and broad expansion sets in. That is what is now transpiring in the training of teachers.

To clarify the concept we may go back to the beginnings of teacher training in America and define the factors which were noticed at that time. In 1829 when Samuel R. Hall wrote his *Lectures on School-Keeping*, the first American textbook on pedagogy, we find a number of the elements of sound education. Public support of education, now an essential fact in a healthy educational system, one hundred years ago was in its feeble infancy. During this century this practice has steadily developed until now it can be validly claimed that education is the religion of the American people. Support has steadily grown in regular historical sequence without more than occasional eruptions of opposition.

We discover, also, that in 1829 the teacher, another essential factor in education, was "imperfectly qualified." Many teachers had no education beyond the common schools, and the earliest normal courses consisted of spelling, reading, writing, arithmetic, drawing, geography, algebra, physiology, geometry, philosophy, music, and composition, a single omnibus course in theory and practice of teaching, and another in observation—all completed in a year's course of elementary or low secondary-school level. In one hundred years we have increased the education curriculum to scores of courses, the subject courses to majors of thirty or forty semester-hours, and the whole curriculum to four or five years. Thus, emphasis upon subjects has developed naturally, courses in theory and practice have evolved, and in general the lines laid down in 1829 have been adhered to, perfected, expanded, and improved in regular historical sequence. None of these factors nor all of them combined are evolving in such fashion as to introduce a new era. They are merely growing into the golden age of an ancient era—better support, better scholarship, better techniques, better buildings, better administration, and, in general, more smoothly running schools, with essential characteristics not radically changed since 1829.

The factor that is now ushering in the new era in the education of teachers has, in its turn, an ad-

venturous history of nearly two hundred years. Accepted implicitly since schooling began, it was first enunciated by Jean Jacques Rousseau in 1762 in his *Émile*. Prior to the time of that erratic philosopher, the assumption was that the aim of education was the mastery of subjects by children. He introduced the revolutionary concept that the aim of education was the development of children, and in his naïve way he claimed that children developed best when they were isolated from the conventions, knowledge, and disciplines of civilization.

This concept of a child-centered education has had its natural historical evolution. Specifically, Pestalozzi made his contribution of concrete learning, Froebel added his refinements, lesser educators carried on the idea and applied it in new situations, and latterly Dewey in his *School and Society*, his demonstration school, and his voluminous writings has given the concept its current vogue. His followers, numbering most of the teachers of America, are now in thousands of centers carrying on studies, research, and investigations into the implications of what the concept of growth of children means to the structure of American education.

In my judgment the development of this concept is unsettling the orderly historical development of education. The new factor, the thorough understanding of children, had been accepted as a paper objective in the training of teachers from the beginning, but its emergence as a technique of education slipped into the literature of education in noticeable fashion when in 1935 the National Society for the Study of Education published its Thirty-fourth Yearbook, entitled *Educational Diagnosis*.

Diagnosis has a medical origin. It connotes intimate knowledge of anatomy and physiology, diseases, conditions, tests—all the mysterious realm of medical investigation and practice. In education it implies a necessity for a similar acquaintance with the functions and structures of the minds of children, their mental pathologies, their urges, drives, and complexes. A reading of this Yearbook leaves one major impression—the vast amount of data that teachers must have if they are to understand the children with whom they deal. Some of these necessary data are known, but some are known by nobody and are fair game, therefore, for educational and psychological research for decades and centuries to come.

It is inevitable that with the evolution of the idea of diagnosis, growth, and development, we must have a new body of subject-matter introduced into teacher-training curriculums, not better courses in the traditionally recognized fields, but a constellation of new fields. With these additions a new era will begin.

I AGREE in part with those teachers of subjects in colleges of liberal arts who maintain that the mastery of subject-matter is a sufficient training for teachers and that courses in education are chiefly thin collections of methods of instruction and administration which can normally be picked up on the job by an average teacher.

I agree in part, but the point at which I part company is the assumption that this need be the case. If courses in education are bodies of superficial methods, it is the error of educators but not the fault of education.

Education has its unique and basic body of materials just as the other professions have. Medicine specializes in a knowledge of the human body and engineering in the structure of materials. The special field of education is a knowledge of the human mind and particularly the minds of children. It is unfortunate that while a doctor-in-training spends 75 of 125 semester-hours in his four-year course on the anatomy, physiology, and pathology of the human body, a teacher-in-training devotes only 6 to 10 hours on psychology and educational psychology which deal with the anatomy, physiology, and pathology of the human mind. It is unfortunate that educators consider an understanding of the human mind of such slight importance, but assuredly it is not the fault of education that educators are not yet alive to the importance of this understanding. The need is vital, but they have not yet recognized it. Conditioned by one hundred years of laudable attention to improvement of scholarship and the theory and principles of teaching, an organization of one million members cannot respond instantly to a new combination of factors calling for new procedures and points of view.

But however charitable one may be to the deficiencies of his brothers-in-the-craft, it yet remains that education is neglecting its fundamental bases. There is available today a huge body of materials in contributory fields which can easily be assembled for the required use of teachers, a body of knowledge without which teachers are less well equipped than nurses in the medical profession. They cannot by any stretch of imagination compare with the doctor, and that in spite of the fact that human psychology is more complicated and needs more artistry than human physiology.

Turn now to illustrations of the bases which education is neglecting. I shall mention three.

The first is the field of clinical psychology. The currently required courses in psychology and educational psychology with credit content of six to ten semester-hours are respectable descriptions of the classical analysis of the human mind into the processes of sensation, perception, and memory, with a slim chapter on the abstract rules of habit formation, the emotions, and the principles of the learning process. But when one compares these pallid analyses of the human mind with the squirming, laughing, crying children that face the teacher, the verbal descriptions of the textbooks become unrecognizable and futile. The approximate equivalent of nothing is said in the textbooks about conflicts, complexes, inferiority, prestige, fantasies, maladjustments, ambitions, rivalries, repressions, inhibitions, friendships, submission, ascendancy, and the scores of phases of psychological experience which drive the child and influence his behavior with irresistible power. The expanding

wealth of data in the field of clinical psychology and psychiatry is a closed book to teachers so far as teacher-training institutions are concerned. A teacher may learn a bit about these subtle elements through experience in teaching, by desultory and often dangerous reading, and in an occasional elective course when he has the time to take it after he has covered the required courses in theory and practice, but at best the bright teacher throughout his life gains only an empirical and amateurish acquaintance with this base of understanding, and the typical teacher remains in ignorance to his death.

A second base which we neglect is the contributory field of physiology and nutrition. We do not refer to the human physiology which is learned in the junior–high-school and freshman hygiene courses, nor to the neurology that is included in the conventional psychology course; rather we point to the data of physiology and nutrition that have extensive influence upon the mental behavior of children. The conventional course in educational psychology usually contains a chapter of ten pages or so on vision and hearing and the physical basis of habit; and this in the face of the enormous strides that bio-chemistry, glandular therapy, nutrition, and physiology have been making in the last quarter of a century. Lazy boys may be changed to model pupils by taking iodine pills or thyroid extracts, excitable girls may become controlled by change of diet, dull children may become bright by the use of pituitary extracts, and whole communities may be raised by the extermination of hookworm disease. The relations between mental behavior and physiological causes are multitudinous.

Every maladjusted child should first be given a thorough physical examination with the expectation that a substantial proportion of his difficulties may be controlled by physical remedies.

Yet this enormous mass of materials, so fertile in data for the understanding of children, might just as well be nonexistent so far as teacher-training institutions are concerned. Teachers graduate by the tens of thousands completely ignorant of these matters. They are too busy mastering subjects and learning the theory and practice of teaching to become acquainted with the facts on which effective methods must be grounded.

Not only should educational method be based upon psychology and physiology, but it has a third base in sociology. To be sure, we treat the sociological base of education somewhere in our education courses in abstract fashion when we refer to the school as an agency of society, responsive to community mores and activities, and when we analyze the elements of group behavior in class and extra-curricular activities. And this is good as far as it goes. But I am referring to the extended use of sociology in two directions—social-case work and the techniques for understanding a community.

Closely related as it is to clinical psychology, sociology explains much about children. The troubles and strengths of children are not completely understood without a knowl-

edge of their homes. Disruption in the home, parental conflicts, untidiness, poverty, malnutrition, quarrels with brothers and sisters, lack of prestige in the neighborhood, gangs, pool halls, streets—all infect the sensitive fibers of children's personalities and when understood explain some of their school troubles. Parental happiness, well-ordered homes, harmony, good food, good standing, wholesome associates, likewise explain the superiority of many children.

Again, teachers who graduate and teach in communities different in mores from those in which they were reared are conditioned to look upon them as peculiar and as such to be treated without sympathetic understanding as one might treat the Japanese or the Fiji Islanders. They have not been taught that communities have histories, that their so-called peculiarities spring from causes that are entirely logical. If they have the techniques for understanding the mores and patterns of the community in which they live and by which their children are conditioned, they immediately develop understanding and the poise that comes from knowledge. This social basis of education, too, is slighted in required courses and in many institutions is ignored.

To these three illustrations of neglected bases I could add others: a familiar and broadened understanding of American culture and civilization to integrate and supplement the teacher's knowledge of subjects and fragments of subjects which he has mastered in the high school and college; anthropology, to explain the evolution of the institutions, mores, and conventions which dominate the cultures in which children and teachers live; and comparative psychology and biology to illuminate the fundamental, hardmouthed drives of experience, such as hunger and reproduction.

ENOUGH has been said to make the thesis of this paper clear. I must, however, answer two practical objections to my position.

Some may say that our courses are now overcrowded and that there is no time for this material. The answer is either of two or both. First, I am convinced that if we had the courage to functionalize our subjects (mathematics, French, or botany) and build courses which would be focused upon competency in teaching rather than upon majors and academic respectability in colleges of arts and sciences, we could save enough time in a course of four years to care for these additions for the present at least. Second, if it takes more time properly to train teachers, a fifth year could easily be added. That condition is coming rapidly.

Others object that such a program assumes that we should make doctors, psychologists, and sociologists out of our teachers. But doctors study biochemistry and use it without becoming bio-chemists; they study anatomy without becoming anatomists and acquire bacteriology without becoming experts. That objection is trivial.

Pragmatic readers will immediately ask what can be done about the situation if the thesis is accepted. Many things can be done, but in general they all follow one simple pattern. First, in each of the con-

tributory areas a collecting agency can be formed. It can be composed of three or four experts in the field who know enough about education to select the facts, principles, and sources of significance in understanding children, and an expert in education who knows enough about the contributory field to check the selections.

That is a simple and quite adequate beginning tersely expressed in principle with the details to be worked out by those engaged in the enterprise. There is no doubt that textbooks could be on the market in five years. Indeed, some more or less adequate books are now available. The task is neither expensive nor difficult.

In conclusion, I hope that I have presented a case for the neglected bases with fairness as well as with frankness. It is clear to me that the currents of professional training that have moved with regularity for the last century are now being impacted by this other current springing from the concept of Rousseau. That fresh current will carry us on into a new terrain. When we have become thoroughly established there, we shall be able to claim by right of cultivation the possession of our distinctive professional area—an understanding of children based upon all the established information that exists in our own or any contributory field.

The Maintenance of Basic Skills

BY ROY IVAN JOHNSON

The Problem of Basic Skills in the College Curriculum

THE curriculum of the American college has been so thoroughly departmentalized and stratified that the finished product, namely, the gowned graduate on commencement day more nearly resembles a shelf of sealed packages trade-marked with registrar's credits than a co-ordinated personality characterized by functioning knowledge and abilities. A student skims over an examination hurdle with evidence of temporary mastery and proceeds to the next course with a feeling of complete emancipation from the benefits supposedly derived from past efforts. Some students have even protested to college authorities against the unfairness of examination questions which, by implication, required them to draw upon facts, principles, or abilities which were the objectives of study in an earlier course or in earlier units of the same course.

Just how much should be retained of the factual content of instruction after a course has been concluded and the results safely recorded and filed in the registrar's office has never been objectively determined. Perhaps much unjust criticism has been heaped upon colleges because of the "fading" which occurs in the knowledge areas of learning as the student is borne on through the successive years of college and into the post-graduate years of living. Certainly, many of the concrete facts which constitute the substance of many courses have served their purpose in the immediate application which is given them in the various problems of which the final examinations are comprised. The educational values which persist may be more largely the ability to handle facts and a receptive attitude toward learning rather than a substantial store of information which can be drawn upon with accuracy and facility in special subject fields which may have only an academic and uncertain relationship to students' later interests.

One thing, however, that the critical public, which constantly sits in judgment on the product of modern education, expects from a college graduate is the ability to do certain things which will mark him as an efficient and well-trained individual. This does not mean that men or women, to be thought of as "educated," must have specialized technical or professional training—desirable as that may be from a practical point of view. It means rather that there are certain fundamental abilities, more or less common

to all in varying degrees of proficiency, which have been accepted as important indexes of culture. The persistence of such abilities beyond the limits of the courses in which they are developed constitutes an essential part of the "preparation for life" which the college rightly insists upon as its goal. And since college is, after all, a part of life, these same abilities will be frequently challenged during a student's undergraduate days as well as in his after-college experience.

Unfortunately, the development of a particular ability in a course designed for that purpose does not guarantee the maintenance of the same ability throughout the period of college training. The problem of education, therefore, with respect to basic skills, is twofold: first, the curriculum must be so ordered that ample opportunity is given for the development of the skills; and second, the curriculum must be so administered that maintenance of skills is secured through continued application in a wide variety of learning situations. It is perhaps in this latter respect that the college program singularly fails in its job.

WHAT are the basic skills? is a question which has undoubtedly arisen in the reader's mind if he has persevered thus far in this discussion. The answer must necessarily be tentative; but on the assumption that a tentative answer is better than no answer at all, I shall indicate my own conclusions in the matter—conclusions which have been formulated after numerous inquiries among professional educators and extensive observation of the needs of students both in college and out.

In order to establish a basis from which to work, lists of specific abilities required in different courses were collected from a group of teachers who showed a willingness to cooperate in an effort to derive the fundamental categories of ability common to the needs of all students. After eliminating the specialized skills characteristic of special courses, and after combining statements which seemed identical or overlapping, a tentative list of basic skills was evolved. This list, with some modifications and refinements which were suggested later, is presented in the remaining pages of this article.

Ability to write clearly and correctly is the first of the communicational skills generally accepted as basic. The presence of required English courses in practically all college curriculums attests the importance which is attached to this ability. But, unfortunately, the perfunctory satisfaction of the course requirement does not guarantee a sufficiently high level of English proficiency in the general practice of students in other courses and in nonacademic activities. In some instances the administration has endeavored to supplement the course requirement by a special English-proficiency test in the junior or senior year. Sometimes the faculty as a whole accepts the common responsibility for enforcing good English practice in all written work, but no plan yet devised seems to give completely satisfactory results. This is partly due to the fact that the

personnel of the English staff is restricted to the smallest possible number of teachers required for actual course teaching, and it is partly due to a suspicion, sometimes voiced with considerable emphasis, on the part of other teachers that the English Department is attempting to shoulder onto the rest of the faculty a responsibility which rightly belongs to the English Department.

The second basic skill is the ability to speak clearly and correctly with pleasing and effective quality of voice. The situations which call for oral communication by far outnumber the situations which require written expression even at the college level. A few minutes of observant listening, on campus or in the classroom, will show the unwisdom of assuming that students are adequately equipped with this important skill. The instruction usually given ends with a few drills in pronunciation and a little remedial work for those who are obvious pathological speech cases. To improve and maintain the speaking abilities of students requires a close observational check on the speech habits of every student and an individual follow-up in most cases where need is apparent; it requires also an acceptance on the part of the staff as a whole of the objective of effective speech as a desirable aim toward which the energies of the entire staff should be directed. It should be noted that ability of speech as defined here includes not only clearness and correctness in speaking but also the more personal quality of pleasant and effective manner. Certainly the ability to communicate one's ideas orally must be accepted as an indispensable tool in the effort to attain increased social competence.

ABILITY to assimilate ideas effectively through reading is the third basic skill. More work has been done on the subject of reading in recent years than on any of the other communicational skills. Most of this work, however, has been directed toward remedial instruction for those students who are obviously weak or toward improved methods of instruction in the lower grades. The need for improving and maintaining efficiency on the part of the average college student has received but little attention, although experiments have shown that the potential improvement in reading on the part of students who have more than medium ability is much greater than the improvement which may be expected from remedial measures applied to students who are obviously deficient. Here again the solution probably lies in the acceptance, by subject-matter teachers, of responsibility for teaching effective methods of study applicable to the subject-matter of their own courses with the help and counsel of a special technician who will assist in diagnosing difficulties and in devising desirable tests.

A fourth basic skill is the ability to assimilate ideas effectively through listening. With the exception of occasional spasmodic instruction in note-taking in particular classes, little has been done to sharpen a student's attentiveness and improve his ability to comprehend the essential points of an oral presentation. It is a com-

paratively new idea to many students that as much thinking must be done while listening as while reading. Indexes of comprehension in listening could be determined as easily as indexes of comprehension in reading and might well prove to be as valuable as reading scores in diagnosing difficulties of students who are making slow progress. Since the auditory method of acquiring information plays so large a part in the learning situations of life, both in school and out, it seems to have a legitimate place as a basic ability in effective communication. Perhaps its very obviousness has led to the assumption that recurrent practice will take care of the need without instructional emphasis.

Physical co-ordination, that is, the ability to handle oneself efficiently and gracefully in tasks that require muscular co-ordination, is a fifth basic skill. Many progressive institutions have gone beyond the point where the teaching of health rules and the training of physical-education "majors" are the sole concern of the department of physical education. To be able to handle oneself in situations which require physical co-ordination is frequently the secret of success not only in mastering an academic subject, but also in performing the numerous personal and professional tasks which crowd into one's experience. Thus far we have paid little attention to tasks of physical co-ordination except to apply remedial medical measures to persons who exhibit the extreme deficiencies of paralysis or other nervous maladies. The case of the otherwise capable student who is "all thumbs" is looked upon as a regrettable circumstance rather than as a challenge to the educational program which accepts responsibility for meeting his educational needs. Certain specialized courses such as typewriting and dancing do, by necessity, compel instructional consideration of the basic elements of physical co-ordination required in performing a particular specialized task.

ANOTHER basic skill is quantitative thinking, that is, the ability to handle with reasonable accuracy and speed the simple mathematical concepts that underlie everyday thinking. Although skill in the use of mathematical concepts did not appear as frequently in teachers' lists of essential abilities as many of the other items, its importance was repeatedly stressed in the comments of persons whose opinions were solicited with respect to the validity of the items as a whole. The point commonly made in connection with this ability is that the degree of comprehension in almost any field of interest may be definitely limited through inability to think clearly in terms of spatial and time relationships or to utilize readily other quantitative concepts relevant to the subject. An analysis of subject-matter in the so-called "content" subjects or a careful tabulation of a day's experience will reveal the fact that concepts of quantity are inseparably associated with effective thinking.

Qualitative thinking, that is, ability to make judgments in problem situations on the basis of comparative values involved, is the seventh basic

skill. One of the essential elements of thinking is the weighing of alternatives. It is perhaps not an idle definition to say that the distinguishing trait of an educated person is his ability to make correct judgments in the presence of new problems. This discriminating sense of values cannot be developed simply through the acquisition of knowledge—the learning of facts. The application of knowledge in problem situations is needed for the cultivation of intelligent thinking. The curriculum of the college offers innumerable opportunities in science, history, art, literature, and every other field of study to make such practical applications of experience. But the fact that this objective of education is not always clearly in focus has frequently produced large units of memorizable subject-matter with little or no emphasis on the problem type of assignment which calls for a discriminating evaluation of experience. If "qualitative thinking" is fundamental in successful living, it is fundamental also in the curriculum of training which the college offers as a preparation for successful living.

IT GOES without saying that some administrative reorganization will be necessary in order to achieve any significant progress in the development and maintenance of basic skills beyond that which normally occurs, more or less incidentally, under the present highly departmentalized system. The job cannot simply be passed over to the faculty by the administration with a polite request to do something about it without a plan of organization which will permit faculty co-operation to eventuate in the type of results desired. It has already been implied in this discussion that the responsibility is more than a departmental one. A preliminary acceptance of this fact is a requisite to the successful operation of any plan; but it will probably be much easier to secure faculty assistance than administrative assistance in implementing a practical program for the development of basic skills. Even a minimum of equipment for such a program will require the time of a director and one or more specialized assistants. Ideally, the personnel needed in such a program would include, in addition to the director, a research and testing assistant, a reading technician who would give some time to orientation in study methods, a liaison member of the English staff for counseling and for follow-up work, a special speech clinician, a member of the physical-education staff who devotes full time to corrective work, a recording secretary to keep records of individual cases, and a capable staff stenographer.

Such a staff co-operating with committees of the faculty could secure, through comprehensive and systematic attention to a program of skill maintenance, results which would go far to remove the criticisms which now justly fall upon the product of college training. Instead of questionable proficiency in communicational activities, students would attain abilities commensurate with the years spent in "service" in college classes. Instead of an imponderable store of fact which evaporates as final exami-

nations fade into the past, students would acquire habits of thinking which utilize experience effectively in problem situations, both in school and out.

The implication of this entire discussion is that education sorely needs a content which will function effectually in meeting the demands which life makes upon those who pass through college into after-college experience under the illusion that they are prepared for successful living. In general, the knowledge factors of the content courses have failed to supply this need. No matter what rationalized defense the college may make for its traditional curriculums, life will continue to judge the college product more sternly in terms of what it can do than of what it knows.

Admittedly there is often only a fine line of distinction between knowledge and ability, but so long as college objectives can be pointed toward usefulness in terms of ability as well as in terms of knowledge, the true perspective of education will not be lost.

Geology in a Forestry Camp

By C. S. GWYNNE

Teaching Geology in the Field

THE science of geology is generally taught through a combination of classroom, laboratory, and field work. A general course in geology is usually a required part of the curriculum content in several major fields such as forestry, civil engineering, agronomy, and landscape architecture.

In the summer of 1936 the writer was given the assignment of teaching Introductory Geology to the students of forestry at the Iowa State College forestry camp located in the Coconino National Forest, thirty miles south of Flagstaff, Arizona. This unusual assignment not only provided an interesting problem for the teacher, but afforded excellent opportunity for students to become acquainted with geologic phenomena as a part of the environment. The writer believing that teachers of geology and others interested in teaching methods may find something helpful in the review of his experience has written this report.

In order to give the reader a better understanding of the problem and of the way in which it was handled certain pertinent features of the situation will first be described. The student group, numbering seventy-one, were taking college work leading to the degree of Bachelor of Science in Forestry. The students in the writer's opinion were average or above average in general intelligence, personality, and enthusiasm.

While in camp, students and faculty were housed in tents. These tents were lighted only by oil lanterns. Such desks or tables as there were in the tents were improvised by the students. Classes held in camp met in a study tent forty feet long, with a table almost the entire length, flanked by benches. This was also used as a study tent by the students when classes were not in session. It was well lighted at night by lanterns.

The camp had a library of about one hundred volumes, of which twenty-five were books on geology or mineralogy. Some were technical, and others were of general interest or written in a popular vein.

The camp was in a rather heavily forested area. The forest was of an open parklike type, however, and thinned out to a scattered growth several miles north of the camp. Physiographically the area was a plateau, only moderately dissected in the general vicinity of camp. The surface bedrock of most of the region was basalt in the form of flows. Small areas of two types of por-

phyritic extrusive rocks were also present in old volcanic vents of the neighborhood. The mantle was thin and almost entirely residual. Sedimentary rocks of the Upper Paleozoic were present beneath the basalt, and outcropped over wide areas twenty miles north of camp. A shallow lake, four miles in length, was located a mile from camp. There was also a wide variety of striking scenic features within a day's driving distance, each of which had an interesting and instructive geological background. Among them were the Mogollon Mesa and Tonto Basin to the southeast, Oak Creek Canyon to the southwest, and San Francisco peaks to the north. Other more remote features were the Grand Canyon, Boulder Dam, the Petrified Forest, and Meteor Crater.

GEOLOGY was taught concurrently with one of the professional forestry courses. This meant that the schedules of the two courses had necessarily to be flexible in order to accommodate each other, take advantage of the weather, road conditions, and so forth. This work in professional forestry consisted chiefly of introductory lectures and the inspection and study of mill and lumbering operations. The work in geology was arranged to fit in with this and had to take particular recognition of the inspection trips, with the result that generally half the time of the group each day was spent on geology, although occasionally all day would go to geology, or it might occupy irregular parts of a day spent on an inspection trip to a sawmill or logging operation.

At this point the question might well be raised, before considering the procedure and the teaching methods used, as to the advantages and disadvantages of teaching geology under the particular circumstances described. In the first place, it would seem reasonable to believe that the teaching of general geology could best be done in the field. If most or much of the time is spent in the field, it should obviously be easier to stimulate a continuing interest of students in their surroundings, to encourage the students to apply the information of textbooks and other books to geologic problems; in short, to connect the facts of geology with the problems of everyday living. The fact that the members of the group, on the whole, were interested in their physical surroundings and realized that the background of geology should be of importance to them in their future lifework as foresters, was also an advantage.

There were certain disadvantages. In the first place, many of the aids customarily employed in the teaching of geology, such as systematic collections, a lantern and slides, movie machine and suitable reels, complete collections of maps, and an adequate library, were lacking. The necessity of fitting the schedule in with that of the forestry course being given to the section during the same interval and of frequent revision of schedule forced by the weather and the condition of roads, were other handicaps. The study tent was much less suitable than a regular college classroom or laboratory, and the conditions under which students did their outside

preparations were none too good. The field within walking distance of camp did not offer a great variety of geologic features; at least it had no advantages in this respect. It was all extrusive volcanic rock, mostly basalt but including also small areas of other types, as already mentioned. The residual mantle rock was generally thin and bedrock outcrops were numerous. Most of the valleys were shallow, and none was occupied by running water. The features available for study formed quite a contrast to those available in the drift-covered areas of the northern Mississippi Valley, where one would find a variety of glacial features, the wide range of rocks within the drift, erosional features, and usually some of the sedimentary rocks. It will be apparent that the geologic setting in which the course was to be taught had no peculiar advantages over such as might be found in other parts of the country.

THE objectives set up for the course were: First, an appreciation of earth features as related to the lives and activities of mankind. Second, an understanding of the geologic processes and of their application in the production of land forms and materials. Third, an ability to interpret the common land forms of the earth's surface in terms of geologic processes and the materials of the earth's crust in terms of their fundamental composition, structure, and origin, together with acquaintance with the literature of geology and its use in seeking the interpretation of earth features. Fourth, training in the application of sound judgment in the solution of geologic problems.

The subject-matter outline of the course included the range of topics into which physical geology is usually divided. It provided also for a brief consideration of historical geology and of geological literature. It was not carried out exactly as planned because of difficulties with schedules and the weather, but as far as subject-matter is concerned it was not far different from any course work in beginning geology.

There was no desire to put the student through a lot of standardized rote learning; neither was a sequence of systematized lectures considered a desirable part of the procedure. The students were provided with an excellent textbook, but this served as a source of information needed in the solution of geologic problems.

The following gives a somewhat detailed description of the methods which were followed in an attempt to attain the objectives stated and to carry out the ideas of the author as to what constituted good teaching methods under these particular circumstances. There were a few preliminaries. The students were told what was meant by the science of geology and were asked for suggestions as to ways in which it might be of value to them or to mankind in their general living. Information was secured from each member of the class as to where he had lived and traveled; this information was used later in class discussions when comparisons with other parts of the country were under consideration. A written exercise was given at the

first meeting for the purpose of directing attention to common geologic phenomena that must have come within each student's field of observation, of ascertaining to what extent he had already thought of and observed such phenomena, and of arousing his interest in the interpretation of geologic phenomena.

Following the first meeting a field trip was taken in the immediate vicinity of camp. In this the students were asked to make many comparisons. These included: first, the differences in physical characteristics of the rocks, which incidentally included basalt of some variety and the more acid rocks already mentioned; second, the slopes near the canyon in which the camp was located and those of a more level mesalike area to the north; and third, the topography of the surrounding area as seen from a near-by fire lookout, and that of Iowa or other geographical areas with which students were familiar. Discussions were held in which these differences were summarized. Other problems having to do with the camp surroundings were introduced on this field trip. The spring high up on a hillside above camp, from which the water supply was obtained, was observed, and the question raised as to why there was a spring at that particular place, and no others near by, and no water flowing in the valleys. This was left for future settlement. So also were many others, including the question of the reason for the distribution of the basalt and of the acid porphyry, to which attention had been directed, and the reason for the presence of the mantle. This trip was intended to direct the attention of the students to their surroundings, to get them beyond the passive acceptance of their physical environment, and to arouse a high degree of interest.

In the next class meeting the minerals making up the lava rocks of the vicinity and already observed in the field were introduced. Those of identifiable size present as phenocrysts were pointed out and named. Larger specimens of the minerals were then given to the students, and they were asked to determine their common physical properties. Other common minerals were then similarly brought into the study. Most of these were not present in the locality, but specimens of rocks from other localities in which they were present were shown to the class. Many of these specimens came from regions through which the students had traveled on the way to camp. For example, granite from the Manzano Mountains east of Albuquerque and sedimentary rocks from the vicinity of Flagstaff were used. In the case of each of these minerals the students were asked to determine the physical characteristics, and then actually to identify the mineral from the description in the textbook. Following this they made up a key for the identification of all of these common minerals, about twenty-five in number.

FROM this a natural step was to the further and more detailed consideration of rocks. Field trips were made to study the basalt of the locality and the sedimentary rocks of the region about twenty miles

north of camp. As a result of their observations the students were asked to describe the rocks in terms of texture, minerals, and the like; to explain their presence at the respective localities; and to give an account of their origin. It was suggested that descriptions of the different classes and kinds of rocks could be found on certain pages of the textbook. The next subject for consideration was that of the other common rocks not found in the vicinity of camp. Some of these had already been introduced in connection with the study of minerals. The method employed in this case was to put certain problems concerning a rock or rocks up to the student, the solution of which depended upon a reading and understanding of a portion of the textbook, and the subsequent use of good judgment. As many specimens as were available were used and as much illustrative material as possible.

The next logical thing for consideration in such a setting would obviously be the mantle and its origin, which had been noted from time to time, particularly in the field. In this connection certain fundamental questions served as problems. Some of these were: accounting for the presence of the mantle; proving its relation to the bedrock; explaining the difference between the ways in which mechanical and chemical weathering, respectively, had affected the basalt of the locality and sedimentary rocks seen on field trips; and the nature of the changes undergone under chemical weathering by the minerals of the basalt. The weathering of rocks other than those of the region was now in order, and similar problems bearing on the origin of residual mantles in such cases were undertaken.

The next steps naturally were the consideration of other types of mantle, and through this the work of running water, glaciers, wind, and waves. These were taken up in order, the basis for all the work being suitable problems involving these matters and solvable with the aid of the textbook. Specific assignments sometimes were made. When no definite assignment was given the students read what they considered to be suitable portions of the book, consulting the index where it seemed desirable. This, in the writer's opinion, gave the students greater opportunity to exercise their initiative in the use of the textbook.

Various problems arose in connection with the trips that were made to the sawmill and logging operations. These were frequently left for continued observation and future discussion and solution. They included such things as the origin of lake basins; the cause for the existence of extinct lake beds, not at first recognized as such by the student; the presence of large faults, sink holes, basalt dikes in sedimentary rocks, canyons, a succession of lava flows, springs of different setting, and unusual types of weathering.

TWO long field trips were taken which permitted the students to view a wider range of geologic features. One of these was to the San Francisco peaks north of Flagstaff with the phenomena of vulcanism, weathering, and erosion. Another was from camp

south to the Verde Valley and thence north along Oak Creek Canyon; this presented opportunity for the inspection of sink holes, lava flows, contacts of lava and underlying rocks, Tertiary limestone lake beds, faults, dikes, and a considerable variety of topography. At the close of camp most of the class traveled to the Grand Canyon. A road log was prepared for the trip, so that each student might have a guide to the features to be seen en route. Arrangements for handling the party were made in advance with the ranger naturalist at the Grand Canyon. In this excellent setting, as the class was led about by the Canyon rangers they were able to apply the principles of geology with which they had become familiar.

In connection with the field trips mention should also be made of the use made of the Museum of Northern Arizona by the group. It is situated a few miles from Flagstaff, in the shadow of the San Francisco peaks. The geology exhibit in the museum is on the order of those to be found in the national-park museums. It contains many fine specimens of material from northern Arizona, and these are accompanied by excellent charts, diagrams, and descriptions. A visit to the museum served to arouse and continue the students' interest in their surroundings, and to make clear matters which had been encountered in classwork and reading.

A GENEROUS use of illustrative material played a prominent part in the teaching at camp. The geologic map of Arizona and one of Iowa for comparison, the topographic map of Arizona, and the Forest Service topographic map of the Coconino National Forest were always on display. A large bulletin board was constructed in the study tent, and upon this was displayed a variety of illustrative materials. These included photographs, most of them taken by the students, of scenes en route to camp or on week-end trips; pictures from rotogravure sections of the Sunday papers or from advertising literature; clippings, many of them by students, from the newspapers on subjects which had a geological slant; and topographic atlas sheets illustrative of various features in other parts of the country. It should be noted that active student participation in the collection of this illustrative material was a desirable feature from the standpoint of the development of student interest.

A museum was also developed during the stay at camp. The material for this was chiefly contributed by students and faculty, but many of the mineral specimens were those which had been brought to camp for class use. At first the specimens were left unlabeled in the museum, but as the classwork proceeded the students prepared suitable descriptive labels for each specimen, as a special assignment. They had all visited the Museum of Northern Arizona by this time and had got an idea of what should go into a description of museum specimens. The museum equipment was simply a table of planks about twelve feet long and four feet wide. More material was collected than could be conveniently used, so the old material was con-

tinually being replaced with new, and the ground beneath the table caught the overflow.

THE student's knowledge or use of knowledge was tested from the beginning by the class discussions, by written solutions of some of the assigned problems, and by tests given in class. The tests given in class involved either one or more of a number of problems which had been assigned in advance, or else dealt with a problem new to the student. A final examination was given at the end of the course. The questions asked were largely of a problem nature and were designed to test the student's ability to use the knowledge or information with which he had been dealing during the course work. The student's mark was based upon his showing in class work, final examination, and a report on the geology of the region.

By way of summation question might be raised regarding the extent to which the objectives were achieved. It is, of course, difficult to answer. The writer feels that there was a decided awakening of interest in their physical surroundings on the part of the students. Such aroused interest has been apparent in the conversations the writer has had with the students who since their return from Arizona have seen new and different country. Most of them came to appreciate the textbook and other geologic literature as sources of information. The ability to interpret geologic phenomena was established to a variable extent depending upon the student. Most of them acquired an ability to interpret the important features of the geology of northern Arizona. It is hoped that many of them will do almost as well in other parts of the country. With such a natural setting for an acquaintance with the science of geology it would seem that the science had every opportunity to become as much a part of the student's life as it had been a part of his physical environment during his stay at camp.

Responsibility for Reporting

By MELVIN W. HYDE

Institutions of Public Trust Owe Their Constituencies, and Themselves, the Truth in Their Public-Relations Programs

ORGANIZED public-relations programs in state-supported colleges and universities are recent developments. There are still many institutions which are doing little planning in connection with this type of promotion, and many of the directors of these programs have little conception of the responsibilities involved in the relating of a complete picture of the activities of the institutions to the supporting public.

In considering whether or not there is a responsibility on the part of any agency for giving the public an accurate and complete understanding of the state-supported college or university, the problem first resolves itself into the question of whether or not state colleges and universities are institutions of public trust. An investigation of investments in these institutions and of the public sentiment toward them should aid in answering this question.

The *Biennial Survey of Education* for 1930–32 illustrates the extent of investments made by the people in higher education. The amount of money expended by the states and cities of the United States for the support of higher education for the academic year 1931–32 was $220,015,154. In 1931–32 there were 1,183,401 students attending these institutions, or about every one-hundredth person in the United States. There were 48,458 professors and instructors engaged in the enterprise.[1]

A summary of the expressed attitudes of the public toward higher education in recent years is offered by the late Robert J. Leonard. He reduced some two thousand criticisms of education appearing in the press; educational magazines and periodicals; reports of deans, directors, and presidents; inaugural addresses; printed sermons; as well as certain biographies, novels, and essays to a total of 461 and classified them under 24 captions. There were more than sixty definite criticisms concerning the American college. These largely fell under such statements as:

There are too many students going to our colleges.
The classes in the colleges are too large.
Instruction is "keyed" to the mediocre.
The methods used by the colleges in selecting the eligible students are antiquated.

[1] "Statistics of Higher Education, 1931–32," *Biennial Survey of Education in the United States: 1930–1932*. Washington, D. C.: Government Printing Office, 1935. pp. 16–30. (Bulletin 1933, No. 2)

The high mortality in the freshman year indicates a serious maladjustment.
The vocational courses tend to pervert the real function of the college.
The brilliant students are not cared for adequately.
The colleges are remote from life.
The athletic policies of colleges are not conducive to efficiency in college life.
The wide margin of free electives is undesirable and destructive.
The colleges foster selective ignorance.
The faculty and students work toward different ends.
We spend too much money on education.
Our "big business" is killing real culture even in our colleges.[2]

These indictments are indeed serious. How they should be interpreted is rather doubtful. One interpretation, of course, is that the public has lost its faith in higher education and is no longer willing to lend its support. That this is not a correct interpretation, however, is made evident by the fact, already pointed out, that large sums of money are being invested by the people in their state colleges and universities. Their faith is also demonstrated by the number of students.

THE attitude of the public toward higher education and its action with regard to state schools are not, to all appearances, consistent. There is an explanation to be offered, however. Certainly, the public no longer has a blind confidence in higher education. It is questioning methods and policies and results, and perhaps would welcome some far-reaching changes in organization. But the public does believe that the state should offer a higher education; and, in the support that it gives, it is manifesting a belief that the state-supported college or university is fulfilling partially, at least, and can be made to fulfill more completely, the purpose for which it exists. This interpretation seems logical. In fact, since the existence of state-supported institutions is almost entirely dependent upon the support of the public, it is necessary to conclude that their presence is proof that the public believes in them. State-supported colleges and universities are institutions of public trust.

The public that entrusts its money and its children to the state colleges and universities is entitled to the knowledge which a reporting program would give them. It has a right to know how its money is being used, what kind of environment is being provided for the youth in the schools, and what opportunities are being offered. It has a right to the benefits to be derived from researches carried on in the fields of art, law, medicine, engineering, business, education, and other vocations. The reporting of such research and its effect upon the world is of the utmost importance. The recent survey of land-grant colleges and universities emphasized the values to be gained through such reporting.

All land-grant institutions are rendering service of incalculable value to the people of their States. Unless this service is placed before the people by the press, magazines, and other publications, the public cannot most completely take advantage of the opportunities offered.[3]

[2] Leonard, R. L. *An Outlook on Education: Collected Addresses.* New York: Teachers College, Columbia University, 1930. pp. 20–28.

[3] *Survey of Land-Grant Colleges and Universities, Volume I.* Washington, D. C.: Government Printing Office, 1930. p. 218. (Bulletin, 1930, No. 9)

To summarize, then, the public, because state-supported colleges and universities are institutions of public trust, is entitled to a fair, complete, and accurate report of their life.

It should be pointed out at this juncture that the public is eager for knowledge of its state schools. Elliott, in speaking of the reporting program at the University of Indiana, says:

> We spend considerable time each day in answering telegrams and letters from editors and others. They want news. They want speakers. They want exhibits. They want bulletins and all sorts of special information.[4]

The Associated Press, which serves twelve hundred papers in the United States, its possessions, and Canada, also emphasizes the demand for educational news. Brill of the Cincinnati office states: "The Associated Press wants the educational news, for it is being demanded by editors in increasing quantity and quality."[5]

EVEN though the constituency of a state college or university is entitled to a fair picture of its life, there is still the question of the effect of such a reporting program on the school. The institution of public trust has a responsibility for maintaining a high level of efficiency. Even if the question of trust were not involved, it is desirable that an institution operate at its best. It is necessary, therefore, to consider the possible effect of a reporting program upon the support and consequent efficiency of the university. Those who believe in the reporting program argue that without it there is a danger of unwise legislation and lack of sympathy and co-operation arising from an incomplete and inaccurate picture in the public mind.

Lippman sounds the danger of a false picture arising from incomplete and inaccurate facts.[6] Pictures of an institution, unless added to and developed, will be in terms of the experience of the individual when he was the leading football player or she was the most representative woman. An individual not privileged to attend the American high school or university will regard education in the light of an elementary-school training received at the hands of the teacher whose subject-matter and method have probably long since become obsolete through the discoveries of modern science. Obviously, an individual with an old and out-of-date concept of higher education would be incompetent to sympathize and co-operate with educational institutions and to legislate wisely for them. Those who favor the reporting program argue that it eliminates the danger of a false and inaccurate picture and supplies the public with the knowledge that enables it to give the institution intelligent co-operation.

The University of Wisconsin presents a case in which an unfair picture of the institution in the public mind, which might have resulted in ill feeling and curtailment of appropriations, was corrected by a

[4] "The President Looks Ahead," *Report of the Annual Meeting of the American Association of College and University News Bureaus*, 1926. p. 3.

[5] Brill, G. M. "Developing Educational News for the Associated Press," *Report of the Annual Meeting of the American Association of College and University News Bureaus*. 1928. p. 42.

[6] *Public Opinion*, pp. 25–29.

presentation of all the facts. Had the facts been presented prior to the political campaign, the issue probably would never have been raised.

For the last four or six years every effort has been made to make the university a campaign issue. In a recent election for state superintendent of public instruction, one candidate made much political capital out of his wholesale attacks upon the university; the other posed as the great friend of the state's highest institution of learning. Two Milwaukee newspapers of opposite political faith vied with each other in attempting to prove economy and extravagance of expenditure. . . . The press of the state is replete with comment favorable and unfavorable to the university. . . . The executive committee then decided to issue a handbook of information concerning the university to set at rest unjust criticisms. [The handbook was sent out.] Not only was it widely commented upon by the press, but the very complexion of the committee signing the document precluded the possibility of dragging this pamphlet into party politics. . . . Much unfair criticism of the university was thus ended, for the citizens had a document in their hands that gave facts and figures telling a powerful story.[7]

For schools which are making progress, there is further evidence that the public gives its support, in the form of sympathy and favorable legislation, in proportion to its understanding of them.[8] Miller and Charles express this belief with reference to public education: "Educational progress in America rests almost entirely upon the understanding which the American public has of its school system."[9] Moehlman, speaking for the public schools, supports this viewpoint of the necessity for reporting in order that the public may know the needs of schools and lend their support:

> Whether the people vote adequate school support willingly depends upon how well they understand what is taking place, and why. The schools must render an account of their stewardship constantly to the people. . . . In so far as the American people have understood the public schools and their needs, they have contributed very generously to their support and have even gone into debt for them.[10]

AGAIN, in the case of the public dealing with secondary schools we have evidence from Evenden[11] and Burgess[12] that the people who want to support the schools find the means to do so, and that this support follows the development of a favorable community attitude. Consequently, it is of the utmost importance that this favorable attitude be fostered by keeping the public informed concerning the aspects of the school, its purposes and accomplishments.

Indiana offers an example of how

[7] Lochner, L. "Shall Graduate Publications Be the Official Organ of the University?" *Report of the Second Conference of the Association of Alumni Secretaries*. 1913. pp. 87–89.

[8] In considering the influence of reporting by the school upon the people's support of it, recognition must be given the fact that other factors, such as the personality of various individuals, may be influencing the people to support the school and that the reporting may not be entirely responsible for results.

[9] Miller, C. R., and Charles, Fred. *Publicity and the Public Schools*. Boston: Houghton Mifflin Company, 1924. p. 1.

[10] Moehlman, A. B. *Public School Relations*. Chicago: Rand McNally and Company, 1927. p. 13.

[11] Evenden, E. S. *Teachers' Salaries and Salary Schedules*. Washington, D. C.: National Education Association, 1919. pp. 131–32. (Commission Series, No. 6)

[12] Burgess, W. R. *Trends of School Costs*. New York: Russell Sage Foundation, 1920. p. 133.

state-supported higher education gains support by keeping the public informed concerning its development and achievement. An Indiana newspaper man, in speaking of the subject, says:

> Here in Indiana it is safe to say that state aid for state schools has been brought about by reason of news-stories about the colleges and about the worthwhile things the universities and their graduates were doing. . . . If the colleges and universities did not tell about the worth-while things they are doing, if the educational institutions did not systematically inform the public as to their development and achievement, if there were no publicity bureaus or information sections or press agents giving out the news of higher education . . . there would be stagnation in the educational world, indifference and scoffing among the politicians, and the hostility of ignorance among the law makers.[13]

The evidence thus far presented would seem to indicate that a reporting program would aid in bringing an institution the kind of support it needs in order to maintain a high level of efficiency. There is an opposing argument, however, which must not be overlooked. It must be admitted that there are unfavorable facts to be told about any institution. The question as to what effect the reporting of these unfavorable stories would have upon the institution must be considered.

THE reporting program set up in this study calls for the reporting of all facts and the concealing of none. There are people, however, who believe that the reporting of some stories would have such a disastrous effect upon the institution that they might better never be told.

Edmond Bartnett, city editor of the *New York Sun*, was asked by Grafton Wilcox, of the *New York Herald Tribune*, to express his opinion on suppression of college news. With reference to the attitude of the college publicity director on this question, he says: "When the undesirable story breaks, I cannot conceive of the paid publicity man doing anything but protect the college and mislead the newspapers. Naturally he cannot serve two masters."[14]

Barrett, of the *New York World*, Lyon, of the *New York Telegram*, and Wood, of the *New York Evening Post*, take an opposite viewpoint in regard to the handling of this type of story. Lyon expresses the reaction of these newspaper men when he says:

> As a general proposition the whole truth is likely to come out sooner or later. A frank handling of the situation and a reasonable attitude toward the reporters covering the story will in my opinion react more favorably to the college in the long run than an attempt to bottle up the facts.[15]

In the *Standards of Practice* of the American College Publicity Association there is a positive statement relative to that group's opinion concerning the suppression of college and university news stories. "No facts concerning an institution should be

[13]Marshall, H. W. "Is It News?" *Report of the Annual Meeting of the American Association of College and University News Bureaus.* 1926. p. 24.

[14]Wilcox, G. "What to Do When the Undesirable Story Breaks," *Report of the Annual Meeting of the American College Publicity Association.* 1930. p. 50.

[15]*Ibid.*

concealed from interested persons or organizations because these facts are unfavorable."[16]

Coffin, of Cornell University, points out that the press will soon lose its confidence in a news service which withholds the truth or changes it.[17] It is far better for the college to deal fairly with the press than to leave the story to be discovered later and perhaps greatly colored by an imaginative reporter.

Although there are those who believe in the suppression of news, the argument against this policy appears to be the stronger. It seems logical that honesty and frankness will eventually cause the public to react favorably toward the institution, and that if an institution is making definite progress, the favorable stories will become cumulative and far outweigh the unfavorable. It is possible that for a time an unfavorable story might cause certain undesirable reactions to the institution. If the story were concealed and later became known, however, it is believed that the reaction of the public to the institution would be more detrimental than it would have been if the institution had made no attempt to conceal the story.

The college or university may point out to the press that no benefits will be derived by the state should the fact be made public that the son of one of the trustees has struck the president or that an equally well-known student has been suspended for some wild escapade. The proper function of the university director of information, however, is to state frankly to the press that the facts given them present a true and exact picture of the story. If the press is dealt with fairly, it will not be as likely to have misstatements in its story, and it may decide to minimize the reporting.

IT IS occasionally desirable, perhaps, to withhold for a time certain items of news which would make legitimate news stories. This is often done by the officers of the law when a crime has been committed and a premature story might prevent the arrest of the criminal. Coffin describes two cases where this suppression might legitimately occur in the case of the college or university.

> For example, if a building development is being promoted and it is undesirable to have the holders of adjoining property know of these plans, there would surely be entire justification for not giving out the facts. To take another kind of example: suppose the university appoints a committee to study some critical question. It may not want even the fact that such a committee is at work to be known until it is ready to report. On the other hand, once matters are decided, the public has a right to know the decision and it is the duty of the press correspondents to send out the news.[18]

The answer to the question, "What is the effect of a reporting program upon the maintenance of a high level of efficiency by the institution?" seems on the basis of evidence to be this: A reporting program increases

[*Continued on page 398*]

[16] *Standards of Practice, American Association of College News Bureaus.* Adopted April 6, 1928. p. 4.
[17] *Report of the Ninth Annual Conference of the Association of Alumni Secretaries.* 1922. pp. 72–73.
[18] *Ibid.*

The College Library: a New Factor in Education

By J. PERIAM DANTON

Changes in Subjects, Methods, and Courses Require the More Diversified and Comprehensive Libraries

ONE day in the 1870's, so the story goes, a friend met John Langdon Sibley, librarian of Harvard College, crossing the Yard. Mr. Sibley had an unusually pleased smile upon his face, and, being pressed for an explanation, he replied: "All the books are in the library excepting two. Agassiz has those, and I am going after them." However apocryphal may be the legend, a certain importance attaches to it by reason of the fact that the incident could have happened. That is to say, the function of the college library down to comparatively recent years was primarily that of a museum for the storing of printed records; in emphasizing, as he unquestionably did, the collection and preservation of such records, rather than their use, a librarian of that day was but conforming to the only library philosophy he knew. The contrast with today is a striking one, for the college library—the term is used here in its generic sense to include the libraries of both colleges and universities—which is not widely used and which does not have a high per capita book use is considered to be failing in its function.

Certainly books were not used fifty years ago as they are today; worse, students were, if anything, discouraged from their use. No testimony more conclusive to this fact need be cited than the hours of opening which were generally two or three a day on one or two days a week and often less than this. Some college libraries were open only one hour every fortnight. Even this did not always mean that students could enter the sacred portals or examine volumes as they chose. It was frequently the rule that students might not actually be admitted to the library at all. Even in the "best" institutions the libraries were open few hours. Amherst, for example, in 1884, was open thirty hours a week; Bowdoin in 1882, on week-day afternoons; Wesleyan in 1891, twenty-nine hours a week; Williams in 1877, twenty hours a week. Nowadays the college library is regularly open seventy-five to eighty-five hours a week; many are open eighty-five to ninety-five hours; a few, like Bryn Mawr with ninety-seven and Princeton with one hundred six, even more; and at least one runs on a twenty-four–hour schedule.

Moreover, every means is employed for making books easily accessible and usable, and the student, so far as possible, is encouraged to handle, examine, and know books himself.

Whereas the library formerly was a little used and unimportant adjunct of the college, tucked away in some far corner, it is now not merely the cultural and intellectual heart of the institution, but also, increasingly, the geographical center, as may be seen most strikingly at Dartmouth, the University of Rochester, Brooklyn College, and in the plans for the new plants of Colby College and Howard University. This is a far cry from the days, not so long in the past, when a single room in a classroom building was considered quite sufficient or when, as was often the case, there was no actual library at all, but the books which the college possessed were distributed among the professors, and used, it may be added, almost exclusively by them.[1]

THE remarkable increase in growth of college library collections may be adduced as further evidence of the recognition of the importance of the library to the educational work of the college. In 1876 only two academic libraries—those of Harvard and Yale—had more than one hundred thousand volumes; no others had more than fifty thousand. Twenty years later nine institutions had more than one hundred thousand books, and nine others had fifty thousand or more. Still no library possessed as many as five hundred thousand volumes. The passage of another thirty-five years shows, in 1930, that 90 libraries had more than five hundred thousand volumes; 33, more than two hundred thousand; 16, more than four hundred thousand; and 5, Harvard, Yale, Chicago, Columbia, and California, more than one million. Finally, five years later, come the latest available comparative figures. In 1935 almost one hundred educational centers had in their libraries more than one hundred thousand books, as compared with two in this class less than sixty years before; 47 had more than two hundred thousand, nearly half again as many as in 1930; 20, more than four hundred thousand; 14, more than five hundred thousand, none in this class forty years ago; six, more than one million; and Harvard, as always, in the lead, had succeeded in amassing the amazing total of three and a half million volumes. It is worth noting, too, that it is not only the large universities whose libraries now, or even five years ago, are to be found in the class having more than one hundred thousand books. Indeed, colleges like Dartmouth, Oberlin, Smith, Wesleyan, Vassar, and Amherst outrank many of the universities, testifying to the fact that the best type of liberal-arts education today may require a large number and variety of printed materials.

Thirty years ago average figures for the libraries of several of the best-known liberal-arts colleges were as follows: total size of collection, 71,000; book expenditures, $1,960;

[1] There were a few notable exceptions to be found among the eastern institutions. Harvard, Mt. Holyoke, and Yale, for example, even as early as 1876 had real libraries.

annual circulation, 7,100. Today the corresponding figures are: 163,000, $5,600, and 29,000. Within the space of less than a third of a century the size, support, and service of the college library have doubled, trebled, and quadrupled.

These examples of the changes which college libraries have undergone during the past fifty or sixty years might be multiplied almost indefinitely. One might speak of the tremendous increase of the personnel, from the single professor devoting part of his time to the library in the earlier days, to the present-day corps of twenty, forty, sixty, or more highly trained members in the largest and most progressive libraries; one might mention the many educational activities which these staff members carry on—instruction in the use of libraries and printed materials, reference and research work, the compilation of bibliographies and reading lists, the preparation of exhibits, vocational guidance, and interlibrary loans. As extensions of the library's service and influence, there might be cited the dormitory and classroom libraries at Stephens College, the lending collections of pictures and phonograph records at Hamilton College and Antioch College, respectively, and widely developed service to alumni at a number of institutions. One could, in fact, choose at random almost any aim or activity of the college and find therein the co-operating effort of the library. In short, the college library of today is not really an extension of its prototype of the late nineteenth century at all, but an entirely new institution and one that has come to be considered the most important single factor in the life of the college.

The functions and the aims, or lack of them, of the college library of the past have already been suggested. What of its specific function and aims today? In the words of a former president of the American Library Association, they are:

> . . . to furnish material for instruction to students in appropriate environment and through a personnel competent to serve as efficient liaison officers to connect instructor and student with library resources; . . . to develop general reading interests through open shelves, browsing rooms, attractive bookstores, book lists and a stimulating readers' adviser's service; . . . to furnish new technical books and periodicals which enable members of the faculty and library staff to keep abreast of their subjects; . . . to meet the needs of such members of the faculty as are engaged in productive investigation; . . . to continue book service to students after graduation; and . . . to make materials available to students involved in correspondence courses and extension classes.[2]

IT IS obvious that deep and fundamental causes must have been necessary to produce, within the space of little more than a generation, such profound, revolutionary, and costly changes in the aims and activities of the college library. Those familiar with the innate conservatism of most college administrators and with the financial restrictions which in any case generally prevent much expansion of existing activities, will at once look for powerful and compelling

[2]Wilson, Louis Round. "The Emergence of the College Library," *School and Society*," XXXIV (October 10, 1931), p. 486.

reasons to explain the present status of the college library.[3]

One of the most important factors, if not the most important one, has been the gradual and now almost complete displacement of the textbook method of teaching by the collateral-reading method. So long as courses were taught with the aid of a single textbook, from which a given number of pages were assigned each day, the function of the library remained negligible; but as soon as it became a recognized educational axiom that a dozen or fifty textbooks were better than one and that it was educationally sounder for students to consult and digest a variety of sources than to be limited to the knowledge and opinions of a single writer, the library began to play a prominent and indispensable rôle. Stemming, perhaps, from the beginnings of the university seminars some time during the last quarter of the nineteenth century, this philosophy rapidly sifted down to even the smallest colleges, forcing them to give vastly increased support to their libraries.

Paralleling this influence was the great expansion in the number and variety of courses offered by educational institutions. Sixty years ago the college, and the university, too, were content, for the most part, to teach the humanities, which generally meant little more than language, art, and philosophy, and a modicum of science, including mathematics. But with the founding of Cornell in 1868, first the universities and then the colleges gradually expanded their curriculums until today the large universities offer instruction in virtually every subject under the sun, and even the liberal-arts college promises opportunity for a thoroughly rounded education, from which subjects strictly professional are generally excluded. The more subjects taught, the more diversified and comprehensive must be the material contained in the library.

Some of these subjects, newly emphasized or re-emphasized in the educational curriculum, have played a peculiarly significant part in the growth of the libraries. This has been especially true of the social sciences in which, during the past few decades, vast quantities of new knowledge have been produced. Furthermore, there has been a marked awakening of general and popular interest in these studies—a fact which is reflected in the increased student enrollment in economics and sociology. Students in these and related fields are of necessity heavy users of books and periodicals; in addition, these subjects are ones in which new material is appearing at a rapid rate. Thus, the heavy use of the library by larger numbers of students combined with fields of high productivity requires greatly increased library support in several directions.

The amount of graduate study in the country has increased greatly, not merely in absolute figures, but relatively also: the numbers of graduate degrees conferred in 1919–20, 1929–30, 1931–32, and 1933–34 were, respect-

[3] Some of these reasons have been discussed more fully, though from a different point of view, by Floyd W. Reeves and John Dale Russell in an article, "The Relation of the College Library to Recent Movements in Higher Education," which appeared in the *Library Quarterly* for January, 1931 (pp. 59–64).

ively, 2.5, 8.6, 11, and 10.5 times that of 1899–1900, whereas the numbers of all students at or above the college level during these years were only 2.5, 4.3, 4.4, and 4.1 times the figure for 1899–1900. It will readily be seen that the augmented ranks of students taking graduate work have forced the libraries of educational institutions to supply more and more specialized material—and in a constantly increasing number of different subject fields. This factor is by no means limited to the large universities: most liberal-arts colleges today offer work leading to the Master's degree in all of the normal undergraduate fields of study, and many colleges, in addition, maintain one or more first-year professional schools.

The introduction of survey or orientation courses—courses designed to cut across several more or less closely related fields of study and to give the student a general view of the field as a whole—is an innovation of the past fifteen or twenty years, but these courses have already been adopted to some degree by a majority of colleges and universities. Such courses cannot properly be taught by the exclusive use of a single textbook, even in the few instances where satisfactory textbooks are available; students must do a large amount of reading in a wide variety of sources, and the library is called upon to provide the necessary materials, perhaps even in fields in which the college has no "department."

There have been changes recently in the methods of teaching the sciences and the time-honored laboratory method is being more and more supplemented by lecture demonstrations and by required readings. Again the library must be expanded to take care of this new demand placed upon it.

Finally, three somewhat related educational movements may be mentioned as being factors in the growth of the library. These are the general-reading course and the Oxford-type reading period during which classes are suspended, the latter introduced into this country by Harvard a few years ago; the "honors" course, in which the student is left "on his own" to study and read in a given subject; and the breakdown of the traditional departmental setup and the substitution therefor of the divisional plan wherein the student no longer chooses a single major subject but, instead, a field in which to concentrate. Each of these movements affects the library in obvious and important ways by increasing the number of readers and average amount of library use per student, and the number and kind of reading materials which the library must supply.

The several factors enumerated have operated directly and indirectly to increase the size of book collections, the size and training of the staff, the obligation of the library to teach the use of the library and of bibliographical tools, and the facilities for study and reading: witness the library seminar rooms, the independent work carrells, and the "browsing" rooms which two or three decades ago were rare features at Harvard, Radcliffe, Smith, and Yale, but are now to be found in almost every modern

library. The regional standardizing associations, aware of the rôle which the library must play in view of these educational changes, have set up and insisted upon minimum standards regarding library size, support, and staff of the institutions they will accredit. The standardizing associations have, themselves, thus constituted a factor in the growth of the libraries of educational institutions, especially of the smaller, poorer, less progressive ones.

The various influences affecting the library have by no means reached a peak; indeed, some of them, like the survey course, "honors" work, and the general-reading course, are quite new or still much in the ascendancy. Further, no one can say when new educational philosophies or practices, calling for increased or different library co-operation and development, may come into being. Thus the function and the activities of the library are in a constant state of flux, growth, and development. The next fifty years may well produce changes as great and as startling as has the half-century just ended.

ONE type of development, or a further extension of a change already noted as existing, may be predicted without fear if one accepts the assumption that higher education at its best and most progressive will, in the future, continue to be greatly dependent upon library service and materials. That development will consist of a much larger average measure of support for academic libraries.

While the various types of growth mentioned in the first section of this article are literally true they provide, if presented alone, a sadly misleading picture of what may be called the run-of-the-mine college or university library. For example, it is a fact that most academic libraries are a good deal larger than they were fifty, twenty-five, or even ten years ago, that many of them are much larger indeed, and that some of them have grown amazingly. But it is also a fact that of the 908 libraries of universities and colleges listed in *Statistics of Higher Education, 1932–34*, compiled by the United States Office of Education, 450, or 49 per cent, still have collections numbering fewer than fifty thousand volumes, and that 311, or 34 per cent, have collections numbering fewer than twenty-five thousand volumes.[4] It is true, too, that the average expenditures of our academic libraries have increased markedly in recent years, but this must not blind us to the fact that, of the 987 universities and colleges reporting in the bulletin just referred to, 420, or 42 per cent, have total annual library expenditures of less than $10,000 and 304, or 31 per cent, have total library expenditures of less than $5,000 a year. Between three hundred and four hundred institutions spend annually less than $3,000 for books and periodicals.[5] And although many library staffs number

[4] *Biennial Survey of Education in the United States: 1932–1934.* Washington, D. C.: Government Printing Office, 1935, p. 360–91. (Bulletin 1935, No. 2)

[5] Professional schools, included in the government tables, have been omitted from the computations upon which these statements are based. The inclusion of professional schools would have lowered the percentages by about five points in each case.

twenty, forty, or more members, one cannot but note with dismay that in 1937 of the 47 institutions listed in the "Small College Library General and Salary Statistics" in the *Bulletin of the American Library Association* for February, 22, or 46 per cent, have a total full-time staff of three or less.

Considering, therefore, the enlarged program of library service and the increased demands which the several educational developments and philosophies already noted have placed upon college and university libraries, one is forced to the conclusion that this increased program and these new demands have generally not been accompanied by proportionate increases in funds for books and service. If the average college or university library is to function as it should, and as it is in a sense being made to do, it is inevitable that additional support must be forthcoming. The alternative is a negation of those very educational philosophies to which higher education has committed itself.

Even a moderate fulfillment of those philosophies will call for another change, namely, the appointment of librarians and other library staff members who, by virtue of educational and professional qualifications, will be truly fitted for the educational purposes which the library must serve. It must be the rule rather than the exception that academic librarians have knowledge of the educational objectives of the institution of which the library is a part, that they be familiar with ways and means of attaining those objectives, both through the usual instructional methods of procedure employed by members of the teaching staff and by library procedures, and that they be able to talk with their colleagues on the faculty on even terms and with the same viewpoint with regard to education and research. This most important consideration is closely related to the one mentioned in the preceding paragraph, for, *ceteris paribus*, such librarians cannot be secured for the average salary, $2,250, which the librarianship of the small institution now pays.

When college librarians are really educators as well as administrators and technicians, and when they are given a reasonable amount of money for books and service, we may expect to find the library serving the educational purposes of academic institutions in ways virtually unknown and impossible today, and in ways, further, which will be of the greatest significance to the whole field of higher education. We may then confidently expect that the ordering, cataloguing, classifying, and circulating of books will be among the least, rather than the greatest, of the library's contributions. We may expect on the library staff, as the rule rather than the notable exception, subject-field specialists who will be able to contribute in direct fashion to the education of students, and who will be able to give honest-to-goodness help to members of the teaching faculty in bibliographic and other scholarly work connected with research.

· *With the* · Technicians ·

Students Receiving Federal Aid

Federal aid for needy and capable college students is a new venture. In administering its student-aid program each participating institution has found it necessary among other things to formulate the policies under which the program is to be locally administered and to select the students who are to receive aid. *Applicants for Federal Aid at Minnesota Colleges*, by Alvin C. Eurich and James E. Wert, is concerned primarily with the selection of students and is limited to the colleges and universities in Minnesota.[1] Specifically, the report deals with students granted Federal aid, students who applied for Federal aid but were not approved, and the characteristics of special groups appearing among those who were granted aid.

The information summarized in the report was collected with the aid of a schedule especially prepared to supply data on the resources, needs, interests, training, and family background of the applicants for aid. A total of 3,061 usable schedules was returned by students receiving Federal aid at 31 Minnesota colleges. Because the number for any single institution was relatively small, except for the University, no attempt was made to summarize the characteristics of the students for each college. Instead the colleges were grouped under five classes: University of Minnesota, Protestant colleges, Catholic colleges, teachers' colleges, and junior colleges. From the applicants to whom aid was denied, 1,689 schedules were received.

The proportion of students receiving aid in each of the groups varied considerably. Almost one fourth of the students registered in junior colleges and one fifth of those registered in Protestant colleges received aid. For the Catholic colleges, the percentage was 13.5; teachers' colleges, 11.9; the University, 9.8; and all colleges combined, 13.1.

From an analysis of the data describing the students receiving Federal aid in the various college groups, from a comparison of the characteristics of students receiving aid and applicants to whom aid was denied, and from the study of special groups of students receiving Federal aid the following are among the inferences which are warranted.

Only 12 per cent of these students in all colleges came from homes located outside the state. The largest proportion of out-of-state, Federal-aid students was found in the Protestant colleges (28.5 per cent) and Catholic colleges (21.5 per cent). Six out of every ten appointees were men. The men were older than the women receiving Federal aid. Judged on the basis of median value of homes owned, the median rent paid, the number of home conveniences, the annual income

[1] Minneapolis, Minnesota: University of Minnesota, 1937. iv+56 pp.

at home, the occupations of the family breadwinners, the average number of dependents in the family, and the median annual expenses of Federal-aid students, there can be no doubt of the need of students granted aid.

There was also evidence that Federal-aid students have the capacity to profit from further college training. The average college mark at the University was approximately *C+* (honor point ratio of 1.43). This is approximately one-half point above the average for all Freshmen. The median high-school rank for Federal-aid students at the University was 84. Again, this is considerably higher than for a random sample of the population. The median rating on the College Ability Test was 57, likewise higher than for all Freshmen. Interest of Federal-aid students in intellectual pursuits is shown by the fact that they read an average of more than two books and almost four magazines during one month, the two most popular magazines being *Time* and *Reader's Digest*.

Additional data are given on a variety of items including the fact that when students are grouped according to the type of dwelling place in which they live while at college, the median estimated expenses vary as follows: live at home, $189; live at home of relatives, $259; live in a bachelor apartment, hotel, or the like, $339; and live in a rooming house, $363. If aid is to be granted on the basis of need it would seem, according to the authors, that the type of dwelling should be taken into consideration in the determination of the amount of aid students should receive.

Graduate Work in Engineering

The rapid changes that have taken place in engineering education have caused greater activity and increased responsibility in graduate departments. In order that adequate standards for higher engineering degrees may be maintained, a study of current practices in graduate work in engineering was considered desirable by many leading engineering educators. A survey was made, therefore, as a co-operative effort of the United States Office of Education and the Society for the Promotion of Engineering Education.[2]

A comprehensive questionnaire was sent to 155 institutions granting degrees in engineering. The survey is the result of the analysis of the returns from 83 schools that grant the Master's degree in engineering, of which 34 also grant the Doctor's degree. From one of the schools listed only partial information was returned so that the full report rests primarily on the data from 82 schools.

Among the topics considered are the historical development of graduate work in engineering in this country; the present status of graduate work; the administration of graduate work in engineering; the teaching staff and graduate work; the general characteristics of the program of graduate work in engineering; co-operative and part-time graduate work; admission requirements; graduation requirements—the thesis, examination meth-

[2]John, Walton C., and Hammond, H. P. *Graduate Work in Engineering in Universities and Colleges in the United States*. Washington, D. C.: Government Printing Office, 1936. (Bulletin, 1936, No. 8)

ods, degrees; relationship of graduate work to undergraduate work; subsidized graduate work, scholarships, fellowships, and the like; improvement of graduate work in engineering; industry and the graduate of advanced courses; and an interpretation of the survey by the Committee on Graduate Work in Engineering of the Society for the Promotion of Engineering Education.

As the study progressed it became apparent that the development of graduate work in engineering is in such a formative state that specific recommendations would be premature. The Committee, however, summarizes some of the more important issues and problems.

Changes in Law at Chicago

Beginning with the fall quarter, 1937, a new four-year curriculum will gradually be put into effect at the Law School of the University of Chicago. That curriculum is discussed by Harry A. Bigelow, dean of the Law School in the March issue of the *University of Chicago Magazine*. In an effort to provide a formal education consciously framed with the objective in mind of preparation for the highest grades of public service, the new plan correlates legal and nonlegal material.

The law courses are spread over a period of four years. In the first year are given the beginning law courses, Torts, Contracts, Procedure, Family Law, and Legal Methods and Materials. This last course is designed to give the student working ideas as to the nature of law and legal concepts in their relation to logic and social policy, and also to provide practice in handling legal material. The student will also take, concurrently, courses in English constitutional history and in psychology. The latter course lays its emphasis upon individual and social psychology as related to legal problems.

In addition to the incorporation of material ordinarily regarded as nonlegal, the new curriculum also has reorganized the law material. One step is handling the legal material in a comparatively small number of fairly large units composed of related legal concepts instead of breaking it up into a large number of separate courses. The four years of the old curriculum had from fifty-five to sixty-three courses; the new curriculum has thirty-one groups. Many of these group topics, too, will be in charge of two or more members of the faculty. The inevitable differences of opinion on the part of the instructors are bound to prove stimulating and helpful.

The only examinations will be comprehensive examinations given at the end of the academic year. A large proportion of the student's time is to be devoted to individual work—one-half in the last year, and one-fifth in the third year. He may elect to do this research work in any two out of seven fields: Crime, Civil Procedure, Property, Marketing and Credit, Economic and Business Organization and Regulation, Government, History and Theory of Law. Such work gives the student an intensive acquaintance with one or two fields of law and gives training in initiative, organization,

and self-expression. The method of instruction under this new plan will vary with the instructors. The case system will not be abandoned but syllabuses, lectures, informal discussion, and individual work will be used in varying degrees.

The whole educational program has the corollary that the number of students must be limited. The student's class standing, his personality, and his potentialities, as well as his completion of two or more years of college work, will be elements in determining his admission.

Under this curriculum, graduates will receive the type of training that a high-grade lawyer should have, of course, but the chief objective is more than that.

> We plan that they shall have a definite understanding of the considerations other than purely legalistic ones that lawyers, judges, administrators and legislators have to take into account in dealing with legal problems of the present time. Our belief is that if they have an awareness of these considerations, ethical, economic or political, and have given them thought as elements in problems with which they have to deal, then, whether their answers to these problems are "conservative" or "radical," they will be based upon an understanding of what is involved therein. Men so trained will be better lawyers, better public officers, and better citizens.

Reading List in American History

The *Harvard Reading List in American History*, which classifies some 290 books covering all phases of American culture and civilization from Colonial times to the present, marks a new educational venture on the part of Harvard University. The faculty committee which compiled the list criticizes the indifference and ignorance of most Americans as concerns the history of their country. From this ignorance and indifference results the "lack of resistance of even well-educated persons to various forms of propaganda which would have them conceive 'Americanism' in terms of class, party, sectional, racial, or religious affiliations."

American ignorance of American history and culture is not only deplorable but dangerous for the future, according to the committee, for

> unless citizens of a democracy are aware of the means by which their country has become what it is . . . they are apt to exchange their birthright for the proverbial mess of pottage. Unless they understand the genesis of various abuses which afflict the country today, they are not likely to choose intelligent means to rid themselves of these abuses.[3]

The syllabus falls into three general divisions: a group of books intended as a general introduction to the larger aspects of American development, a group of "thread" books which will give the reader a more particular knowledge of a few of the strands of interest in the story of American development, and a series of special topics with selected readings.

[3]Cambridge, Massachusetts: Harvard University Press, 1937. pp. 3–4.

·The·Reporter·

THE chapel at Middlebury College has been enlarged 25 per cent. While students in most colleges which continue to require students to attend chapel are protesting against such regulations, Middlebury students annually put themselves on record as in favor of compulsory chapel attendance.

A CAMPAIGN to raise $4,250,000 has been begun by Barnard College. Two million of this amount will be used for a building program, one million for scholarships, and one million for extending and strengthening the educational facilities of the college. The remaining $250,000 is to be employed to endow fellowships and for the financing of visiting professors.

BECAUSE of the increase in enrollment at the University of Southern California all salary schedules at the university are being increased during the coming academic year.

ADMISSIONS to the freshman class of Pennsylvania State College will be restricted this year to 1,405 students.

THE Department of Physical Education of the University of Missouri now offers a course in bait casting.

A JANITOR, Edwin Lee Harris, at the University of Pittsburgh during the past six years, has just been granted a degree of Doctor of Philosophy. A Negro, thirty-four years of age, Mr. Harris will this fall become a professor of chemistry at Wilberforce University.

THE University of Pennsylvania is planning to establish an experimental college of liberal arts at Valley Forge. The chief objective of the new college will be to preserve "the intimate values of the small college in conjunction with the advantages of a great university."

FOR the first time in the history of the University of Chicago the windows of the Harper Memorial Library have been washed. Following the Oxford tradition, the authorities at Chicago years ago decided not to wash the library windows, but they have now become so black and the library has thus become so dark that the Oxford tradition has been abandoned.

MOTION pictures will be used this year in the training of lawyers at the John Marshall College of Law of Jersey City, New Jersey. A film featuring Dean Emeritus John Henry Wigmore, of Northwestern University, and Felix Frankfurter, Joseph H. Beale, and Samuel Williston, of Harvard, will be used by the faculty of the college to acquaint students with the legal concepts and methods of leading law authorities.

The college will also conduct a "speech clinic" for its students. Each embryo lawyer will be required to

lecture and to argue before a microphone and later to hear his words reproduced. The equipment in the clinic is a gift of a well-known New York lawyer, Max D. Steuer.

DURING the past academic year Yale University granted $319,053 to students in scholarships and beneficiary aids. Assistance to graduate- and professional-school students and employment aid brought the total of student benefactions to more than a million dollars.

A GIFT of ten million dollars by an anonymous donor has just been made to Yale University for the study of cancer. The gift is to be known as the Jane Coffin Childs Memorial Fund and will be supervised by a board of scientific advisers.

GIFTS to Cornell University during the academic year 1936–37 totaled $1,477,626.05. This sum is almost twice as large as that given in the academic year 1935–36. The Cornellian Council, the alumni fund-raising agency of the University, accounted for more than $140,000 of this total.

DURING the summer months the University of Chicago received pledges and cash gifts amounting to $598,350.

THE late John Good in his will left $100,000 to the University of Denver.

THE student-aid program of the National Youth Administration has been continued for the academic year 1937–38 but on a reduced scale. Approximately 30 per cent fewer students will be given assistance. During the past two years all colleges and universities throughout the country were permitted to appoint students to *NYA* up to a total of 12 per cent of the enrollment at the beginning of the academic year of 1934–35. Under the new regulations the number of students to be given assistance will be 8 per cent of the enrollment at the beginning of the last academic year.

BECAUSE of a disagreement with the Board of Trustees, Tyler Dennett has resigned from the presidency of Williams College. President Dennett, who assumed his position in 1934, is being succeeded by James Phinney Baxter III, a graduate of Williams in 1914 and an associate professor of history at Harvard University. President Dennett resigned because of his disagreement with the financial policies of the Board. He asked for a "suspensory veto" on its actions. This the trustees were unwilling to give him.

THE University of Florida and other state institutions of higher learning in Florida are planning an extensive development of their art programs because of the recent gift of the John and Mable Ringling Museum of Art to the state of Florida. This Museum, worth many millions of dollars and known as "Cad D'a'Zan," has been accepted by the state of Florida so that its institutions of higher learning may develop extended resident and adult programs in art.

The Museum opened in 1931 and constitutes one of the most complete and valuable collections of archi-

tecture, sculpture, and painting in the United States. Its value is placed higher than the combined value of the plants and equipment of the several institutions of higher learning under state control in Florida. The Museum is expected to become one of the most important cultural centers of the South. It will be open to the public who, during the past year, have visited it at the rate of twenty thousand a month.

THE Board of Regents of the University of Wisconsin has announced its budget for the fiscal year 1937–38. This budget restores salary reductions amounting to a total of $466,341. The University of Wisconsin salaries are still, however, reduced from the standard of 1931 as follows:

	Per Cent Cut
First $3,000	0
Next $1,000 or fraction	15
Next $1,000 or fraction	20
Over $5,000	25

The total operational budget for the year 1937–38 amounts to $8,934,731, an increase of $1,022,000 over the budget of last year.

A NEW liberal-arts program "with a definite modern vocational slant" has been announced by Hofstra College, a division on Long Island of New York University. The departmental organization usual in most colleges will be abandoned at Hofstra. In its place academic divisions will be set up as administrative units. The departments of economics, sociology, and political science, for example, have been reorganized under the division of social sciences, in which no departmental lines will exist. The other three divisions will be the humanities, mathematics and pure science, and statistics and business organization.

STUDENT drunkenness is on the decrease, but student drinking is on the increase, according to the results of a recent *Literary Digest* survey. Seeking information in 581 institutions throughout the country, representing every type of sectarian and nonsectarian school, the *Literary Digest* has come to the following nine conclusions:

1. Drinking is on the increase everywhere, but there is relatively less drunkenness.
2. Students abhor the drunk, admire the man who can drink like a gentleman.
3. One-third of the colleges replying see a great increase in beer drinking, two-thirds see an even greater increase in cocktail and highball consumption.
4. A vast majority of college presidents see drinking as a problem in other institutions, but not in their own.
5. Everywhere teetotal enforcement in college appears to be crumbling.
6. The average undergraduate does most of his tippling off the campus.
7. Women students in general have lost their moral revulsion toward drinking.
8. Most student editors agree that repeal has aided temperance. The majority favor education for drinking, not against it, as a solution of the liquor problem.
9. No matter whether the state or community is wet or dry, students have little trouble in buying what they want to drink.

THE University of Michigan has announced the establishment of a new division of the institution to be known

as "the Institute for Human Adjustment." The first undertaking of the institute will be the correction and elimination of special problems in adjustment, caused by child and adult speech defects. This work will be under the direction of the Horace H. Rackham School of Graduate Studies and will involve investigation of the following problems:

1. Those involving the handicaps of aphasia, aphemia, disarthria, spasticity, cleft palate, and other forms of fractional speech.
2. Those connected with congenital deafness.
3. Those resulting from deafness ensuing after birth.
4. Those concerned with the prevention of fractional speech and sequelea of early deafness.

The institution has planned to undertake other studies having to do with human adjustment which will include four phases of activity, among them being the actual adjustment of handicapped individuals, field work in schools throughout the state, the training of specialists to carry on adjustment work, and a continuous research program for the development of fundamentals and techniques.

IN A recent address delivered at the University, Professor Charles H. Judd of the University of Chicago has proposed that general education should be divorced from the aristocratic tradition of liberal education and provide a secondary-school curriculum appropriate to present-day life. Mr. Judd said in part:

Some day the people of the United States will realize that the European tradition and the European definition of liberal education have no more place in America than has a monarchial form of government or its illegitimate descendant, Fascism.

They will recognize the fact that the American educational institution which attempts to maintain a Latin-geometry curriculum is deceiving itself and its patrons by wearing the last tattered fragments of the toga of aristocracy. What this country needs, and needs sorely, is liberal education appropriate to present-day life.

All that is necessary to make possible a rational organization of the curriculum is a clear recognition of what the individual needs in his two capacities—first, in his capacity as a participating unit in community government and in community social life and, second, in his capacity as a productive worker playing his peculiar part in trade, commerce, or a profession.

There are many people in the United States who are unwilling to recognize the fact that business is becoming, if it has not already become, quite as aristocratic as preaching. On the other hand, tradition is having difficulty in maintaining itself. Agriculture is receiving far more attention in the universities of this country than is theology. Engineering is on an equal footing with law and medicine. Some of the greatest endowments of recent times have gone to institutions which prepare for the new professions.

It is becoming necessary for those who are disposed to perpetuate aristocratic traditions to adopt a new technique of supporting the kind of education which they favor. It would not do in this country for the would-be aristocrat frankly to assert their determination to maintain themselves against the lower classes. The aristocrats have been wise enough to employ a high-sounding democratic name for the peculiar brand of education which they regard as appro-

priate for themselves and for their children—they call it "liberal education."

They use a word which in Rome referred to the free citizens. Literally, the term "liberal education" means the education of the free citizens. All other kinds of education have been labeled by modern aristocrats "vocational"—an adjective reminiscent of ancient slavery.

A CODE concerning academic freedom has been recently inaugurated by George Washington University. It reads as follows:

1. The university will not place any restraint upon the instructor's freedom of investigation. An instructor, however, will take cognizance of university policies in regard to the co-ordination of research efforts and he will not permit his research to interfere with his teaching duties. The university has the right to request a member of the staff to plan his investigative work to contribute to co-operative projects when such have been undertaken by a vote of the appropriate faculty committee.

A member of the staff may make a request of the university committee on research that his program be modified to permit him to undertake an approved research project which could not be undertaken without such co-operation.

2. The university will not impose any limitation upon the instructor's freedom of exposition of his own subject in the classroom or in addresses and publications outside the university, except in so far as the necessity of adapting instructions to the needs of immature students limits the scope and character of instruction.

3 No instructor may claim as his right the privilege of discussing in his classrooms controversial topics outside his own field of study. The instructor is morally bound not to take advantage of his position by introducing into the classroom provocative discussions of irrelevant subjects within his field of study.

4. The university will recognize that the instructor in speaking and writing outside the institution upon subjects beyond the scope of his own field of study is entitled to precisely the same freedom and his subject to the same responsibility as is attached to all other citizens.

If the extramural utterances of an instructor should be such as to raise grave doubts concerning his fitness for his position, the question should in all cases be submitted to a faculty advisory committee. It should be clearly understood that the institution assumes no responsibility for views expressed by members of its staff; and instructors should, when necessary, take pains to make it clear that they are expressing only their personal opinions.

· Editorial · Comments ·

Alumni Gifts

THE alumni have always made trouble for college and university administrators. A century ago they projected themselves so vigorously into the bitter discussions of the classics and of academic government that educational progress lagged for several decades. Today they are perhaps even more troublesome in their emphasis upon athletics and in their failure to understand the part that institutions of higher education must play in a changing social order. The alumni are so powerful that most administrators have not had the courage to come out with forthright pronouncements concerning the part that alumni should play in higher education. President Robert Maynard Hutchins, of the University of Chicago, however, has taken the alumni to task in his two recent books. In his *No Friendly Voice* he writes as follows:

> All alumni are dangerous. They see their Alma Mater through a rosy haze that gets thicker with the years. They do not know what the college was really like. They do not want to know what it is like now. They want to imagine that it is like what they think it was like in their time. Therefore they oppose all change. If changes are made without approval, they are resentful. Since no useful change could ever be made with their approval, few useful changes have been made in higher education.[1]

[1] *No Friendly Voice.* Chicago: University of Chicago Press, 1936. p. 87.

In his *The Higher Learning in America* he has this, among other things, to say:

> They are interested in all the things that do not matter. And their oratorical powers and the hope that they may some day be induced to come forward with financial support intensify the interest of the university in the things that do not matter. It is too much to expect that citizens who never went to college can understand what a university is when those upon whom the blessings of the higher learning have been showered understand it less well than anybody else.[2]

Many administrators agree with President Hutchins, believing, as one of them recently observed in private, that "the alumni are an evil which every college must endure." On the other hand, however, more colleges and universities every year are depending upon their alumni for financial support. Where this assistance is given the alumni in general, rather than being a liability, are an asset of considerable importance.

As an example of the spirit which universities should cultivate among their alumni, we quote a rather lengthy passage from the pen of C. E. Lovejoy, executive secretary of the Columbia University Alumni Fund, appearing in the *Alumni News:*

> The Alumni Fund Representative for the Class of 1902, Ernest A. Cardozo, paved the way one day late in May by

[2] Hutchins, Robert Maynard. *The Higher Learning in America.* New Haven: Yale University Press, 1936. pp. 22–23.

phoning to inquire if I could see one of his out-of-town classmates. "Of course," we replied. And later in the day we had an opportunity of meeting a Columbia alumnus from St. Louis whom we had known slightly from some local club correspondence. He provided a bigger thrill than any other visitor this Spring.

Here's the whole story.

Frank Y. Gladney, '02L, walked into the office a few hours later, lay down a check on our desk for $2,400 made payable to the Columbia Alumni Fund, and said he wanted this to be his gift to Columbia this year. Eventually, it may be more. Without making any promises or definite commitments, he expressed the hope that some day soon he might increase it by another sizable amount.

He is a tall, gaunt Missourian and now a successful St. Louis lawyer of the important firm of Jones, Hocker, Gladney and Grand. But once he was a poor farm boy in Auburn, in rural Missouri. He managed to get through the University of Missouri and then, over the protests of his family who wanted him to stay on the farm, he announced it was his ambition to be a lawyer. The farm was sold and his share of the family division of the proceeds was just enough for one year in the Columbia Law School. He entered in the Fall of 1899 as a member of the first year of the Class of 1902.

. . . He had to make every penny count in those days. There were no Columbia dormitories and so he hired a hall bedroom downtown on Seventh Avenue, cooking his own meals over a gas jet and picking up an odd dollar here and there.

During the Spring of 1900 he heard there were a few competitive scholarships in the Columbia Law School and he took the exams, sort of half-heartedly. He was afraid there were city boys, slickers perhaps, who would have higher marks. He hadn't heard from the exams when vacation time arrived in June.

He had no farm to go back to and so looked for a job in New York for the summer months. He got one. It was as a conductor on the trolley line that ran from Brooklyn Bridge to Coney Island. They made him buy a uniform, costing nearly $20, and took it out of his wages. He worked on the night shift, usually between 6:00 P. M. and 5:00 A. M. . . . He made a hit with his superiors. The starter talked to him, promising him a permanent job eventually as an inspector at $70 a month. This was a lot of cash money for a farm boy in 1900. The starter came to him on July 3. "This will be a busy holiday," he explained, "and we wish you would work overtime. You'll get double pay, you know," And so, from the evening of July 3 until the early morning of July 5 Gladney collected nickels and rang them up, back and forth, between Brooklyn Bridge and Coney Island.

He had a furnished room near Prospect Park with an old Irish landlady, almost as impoverished as himself. But she had a big heart. When he came in dead tired long after midnight on July 5 . . . she remarked, "A letter came for you." He looked at it. The envelope bore the corner card of the Columbia University Law School. He remembers telling the Irish landlady something as follows: "That letter will make or break me. That letter brings me the news that I will either become a lawyer or a trolley car inspector." . . . It was just before daylight on July 5, 1900, therefore, when he found that he had won one of the coveted Columbia Law School scholarships. It would provide his tuition, amounting to $150, for his second year.

The rest of the story is obvious. He made good. Columbia awarded another scholarship to him for his third and final year in the Law School, and he was graduated with his Bachelor of Laws degree. With the incentive of this scholarship his Law School life became easier. He got

some tutoring jobs to make spare money on the side for room and meals.

In the 35 years he has become a successful lawyer and a good one. For the past 18 years since the Columbia Alumni Fund was established, he has been receiving Alumni Fund literature each year and letters from his Class Representative.

One day early in May while in his St. Louis law office he got out a pencil and paper and started to figure. He found that the two scholarships, amounting to $300, which Columbia gave him in 1901 and 1902, would have amounted to about $2,387 if computed at compound interest. Whereupon he drew his check for $2,400 to the Columbia Alumni Fund and came in to talk to us about helping the University and at the same time helping another deserving law student as he was helped more than three decades ago.[3]

[3]Lovejoy, C. E. "F. Y. Gladney, '02L, St. Louis Lawyer, Endows Room as Repayment to Columbia for $300 Scholarship," *Columbia Alumni News*, XXVIII (June 11, 1937), pp. 9, 25.

Anyone who is familiar with alumni problems in higher education knows that but a small percentage of the alumni overemphasize athletics. The vast majority are either indifferent to their institutions or are grateful for the opportunities which were made available to them as students. If alumni continue to emphasize rah-rah-ism throughout their lives and if they are socially reactionary, the responsibility belongs with the college and not with the alumni.

By thorough teaching methods and by sensitive student-personnel programs, colleges can cultivate vast numbers of alumni with the same spirit as Mr. Gladney. The alumni of the future are being made today. Administrators who deplore the troublesomeness of their graduates should keep this ever in mind.

W. H. C.

··Reviews··

The Revenues of a College

AN ACCOUNT OF THE FINANCES OF THE COLLEGE OF ST. JOHN THE EVANGELIST IN THE UNIVERSITY OF CAMBRIDGE, 1511–1926, *by Henry Fraser Howard.* Cambridge, England: Cambridge University Press, 1935. xiii+398 pp. 21*s.*

This title fits in with the beginnings of St. John's College and also indicates exactly the author's analysis of the revenues amounting to £60,000 a year. The book is a specialized study of the College endowment and expenditure. Some reference is made to its educational and historic rôle and "internal revenue" is treated briefly. No account of the parent foundation, St. John's Hospital, is given. One page gives expenses and setbacks since 1926 (page 258). The College has met £12,000 repairs to library, court, and hall, without drawing on its reserves. Increased "internal revenue" has balanced losses.

The Appendix gives a list of masters, senior and junior bursars, that will be welcome to their relatives. The lists of colleges estates, manors, and livings might help novelists to find unhackneyed names—Bapchild, Muggington, West Wratting, Smardon, Snoring, and Whaplode. The rentals, revenue surveys, and dividend book are summarized, notes giving curious details. Several references to "pensions for gyps and bedmakers," show a concern for humble dependents not usual in American colleges.

Bishop Fisher of Rochester (executed under Henry VIII, 1535), is given credit for the college's start, its statutes, the three farms and £500 of his own donation, and for the dissolved "nunneries" of Ospringe and Higham, Kent, and Bromhall, Berks.

But petty matters are also noted. A bursar's error in adding figures is exposed (page 94, 11½*d.*+9¾*d.*=2¼*d. sic.*). Also the £14 12*s.* stipend (page 49) of an early master, augmented by 1*s.* a week commons (page 9), by "praeter" (1–2*s.* a week) and by a 4*d.* allowance, was small even for 1598.

The scheme of renting farms for low, "reserved" rents used for College commons, an extra payment in "corn" at the price on rent-day—(the source of "praeter" for fellows and scholars), and a "fine" to raise the total income to market level, paid when a lease began, gave the underpaid College officials a chance. Like so many things English, it began in a tentative way. Leases of farms were given to masters (Ri. Clayton, 1568; Dr. Gwyn; Dr. Beale, 1634), who kept what "fines" they could collect. Dr. Gwyn relinquished his for £200. Later, such income was pooled as a dividend to master, fellows, and scholars. Fellows and Court favorites speculated on these "beneficial leases." Andrew Coppinger, of Gray's Inn, miscalculated (1578) and asked for help (page 48).

Later, the college figured the tenant's interest at current rates (1755—9 per cent, 1764—8 per cent) and fixed "fines" accordingly. Renewals were usual after seven years on a twenty-year lease. Though no legal obstacle is known, the College hesitated to raise "reserved rents." Perhaps it preferred to speculate on "fines."

Trouble with repairs was so common that allowance was made for them in setting "fines." Floods, fires, robbery, extra taxes, "fall of rents," and lawsuits, occasioned allowances. Dan Colwell, Holbeach, paid no fine in 1660 because he had defended the College marsh lands in a lawsuit.

Mr. Charles Blick, bursar 1816–42, stands out as a personality. He liked to

inspect farms and to run them himself rather than lease them although he lost money.

By 1868, the last "fine" was received. Since then, rents are on a market, or "rackrent" basis. The College owns some sixty farms, besides city house-property, in eighteen counties (*see* the map, page 383), has twenty-two manors and shares in forty-six church livings (advowsons), formerly used as pensions. Part of each fellow's income (£300–£500) still comes as a dividend depending on the College revenues.

MAC. H. DONALDSON
Boston University

Accounts of Four Famous Scientists

FAMOUS AMERICAN MEN OF SCIENCE, *by J. G. Crowther*. New York: W. W. Norton and Company, 1937. ix+414 pp. $2.50.

The title of this book might lead us to expect an account of all who could rightly be included in a list of our distinguished scientists. But the author's special aim has led him to choose only four representative men, namely: Benjamin Franklin, Joseph Henry, Josiah Willard Gibbs, and Thomas Alva Edison. And the marked interest of the book lies in this special point of approach as set forth in the Foreword:

> The progress of science is not accidental. It is due to the needs of the society in which it occurs, and its direction is affected by the conditions of that society.
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> . . . . . .
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> Many persons believe that the economic and social disasters of today are due to the development of science. If the world economic depression is due even in part to the growth of science and technology, then science and technology are clearly of enormous social, besides productive, importance in modern life. The investigation of the rôle of science in modern life becomes a social duty.

The author has, then, a social aim, an eye to science in relation to social needs, conditions, and consequences. He approaches this special study with liberal sympathies and a modern point of view, having at command as background, a wide field of knowledge in the history of science. His method is to present a vivid biography of each of these four scientists, including a study of his work as affected by the social conditions of the time in which he lived, with constant interpretative comment.

Benjamin Franklin probably lends himself best to illustrate the author's viewpoint. More than one-third of the book is devoted to him. The author is an ardent admirer of Franklin, regarding him as having the most advanced mind of the eighteenth century and the first great American scientist. The reader will find the chapter on "Science and the American Constitution" of special interest at the present time because of Franklin's forward-looking conception of the Constitution as experimental even when adopted.

The author dwells at length upon the interest surrounding the founding of the Smithsonian Institution, and Joseph Henry's work as secretary from 1849 until his death in 1878. This position gave him the opportunity to carry on research work of great value to the Government, and also to create important methods of scientific administration.

Willard Gibbs was a scientist whose whole life was spent in an institution that had, at the time, small regard for scientific studies. The author suggests that Gibbs might have greatly enlarged the scope of his studies and have been less the pure scientist had he lived in a social world whose needs he could have known. There can be no question as to the great value of his contributions although our own scholars were late in appreciating them.

Edison typifies the inventor, although the author believes he also deserves to be grouped with the scientists. Of course there can be no question as to the value of his contributions in the field of inventions.

The reviewer found the book of great interest. It contains a vast amount of information, and its ideas, stimulating, suggestive and some, debatable, are

presented in an attractive way. If it be thought that scientific forces are disruptive of society, rational methods of promoting and utilizing science may be the remedy, and in the long run, may get us out of our troubles.

WILLIAM MCPHERSON
Ohio State University

One Phase of Reading

CONTROLLED READING: A CORRELATION OF DIAGNOSTIC, TEACHING AND CORRECTIVE TECHNIQUES, *by Earl A. Taylor*. Chicago: University of Chicago Press, 1937. xxviii+367 pp. $3.50.

Part I, consisting of 44 pages, presents several photographs of persons who have experimented with eye-movement cameras and photography together with the principal bibliographic citations to their works. No order of importance or chronology is followed, but they extend from B. Erdemann and Raymond Dodge's pioneer monograph and eye-movement camera in *Psychologische Unterschungen über das Lesen, auf experimenteller Grundlage* (1896) to the present.

Part II is a series of photographs of the various types of eye-movement cameras designed and built in the various universities of America, starting with the pioneer Dodge-Cline falling-plate camera (1901) and ending with a small portable eye-movement camera designed by Mr. Buswell (1935). Credit for the first portable binocular eye-movement camera goes to C. C. Taylor and J. Y. Taylor (1932). From this model the author and the American Optical Company have developed the Opthalm-O-Graph and Metron-O-Scope. It is claimed that "a binocular reading graph is an essential part of any comprehensive eye examination," and further that schools should own this equipment for the diagnosis of poor readers and for their training in rapid and effective reading (page 107).

Much is made in the next 100 or more pages of the conditioning of the eye-movements, "to reduce the reaction time and to broaden the recognition span." In spite of the fact that there is little question that many poor readers are slow, pause too frequently, and regress too often, as the author's records show, the proof of dependent relationship is unconvincing. Are the readers poor readers because they are poor eye-movers, or do they show poorly trained habits of accommodation and convergence because they perceive visual forms slowly and inaccurately?

Is it true that the visual angle of a thing to be seen properly cannot extend over into the binocular paramacular field? That no line of print (length not stated) "can be read with just three fixations" (page 156)?

Two scatter plots are shown on pages 231 and 232. They illustrate the effect of training on the Metron-O-Scope upon regressions. Both plots are capable of quantitative determination of the relation of this training to regressions, but the reader is left to guess its extent. From this evidence alone it seems that the claims of the author that there is distinctly improved speed and comprehension are unjustified (page 233). Neither of the plots shows higher correlation than +0.4.

It is the opinion of the reviewer that the book is chiefly valuable as a history of eye-movement photography and as a summary of references. Its scope is narrowly limited to one phase of the complex process of reading, namely, eye-movements, while others receive little or no attention. The book should be available to students of the mechanics of reading, but they should understand that much that is fundamental to controlled reading, or the extent to which it can be trained, is still unknown.

S. RENSHAW
Ohio State University

"More Psychiatry than Surgery"

THE RÔLE OF POLITICS IN SOCIAL CHANGE, *by Charles E. Merriam*. New York: New York University Press, 1936. 149 pp. $3.00.

This little book offers the rare delight of following the mind of a scholar who can

furnish fresh perspective upon vital current issues. The lectures were given at New York University in 1935 in a series presented by the Stokes Foundation. They represent a development of special phases of Mr. Merriam's forthcoming work on "Political Power."

The first lecture on "Boycotting Government" is one of the most memorable. Adam Smith, Karl Marx, and Herbert Spencer are all "taken for a ride," on the same hayrack. Smith and Ricardo, Marx and Lenin all reacted against the exaggeration of the political state into similarly excessive exaggeration of the rôle of economic forces. The author confronts the reader with the inclusive problem of control, operating perhaps through family life, patriotic traditions, superstition, prestige relationships, religion, armed force or subtle psychological influences, and including, of course, the enormous power of modern economic controls.

Mr. Merriam refuses to be trapped in well-worn dilemmas. He does not set up an either-or, a flat yes-or-no, or a struggle between reds and blacks. He seeks to foster creative contriving in the field of planning and control. He points to the emergence of new strategic points for co-ordination and influence. He calls upon teachers as well as jurists, economists, engineers, and psychologists to co-operate in the social invention which will keep pace with the tempo of material advance. The peaceful, ingenious, and carefully studied character of his proposals is symbolized in his sentence, "There is more psychiatry than surgery in planning."

GODWIN WATSON
Columbia University

BOOKS ABOUT JOBS: A BIBLIOGRAPHY OF OCCUPATIONAL LITERATURE, *by Willard E. Parker.* Chicago: American Library Association, 1936. 402 pp. $3.

Since its inception four years ago, the National Occupational Conference has been attempting to bring together all facts concerning occupations for use by vocational counselors and others interested in the occupational adjustment of youth. The present volume is one of the products of the work of the Conference. It consists of a compilation and classification of approximately eight thousand publications that describe all types of occupations.

Many of the items included in the bibliography are, of course, not especially important. Mr. Parker has read many thousands of others, however, which he has rejected, and the articles and books which he has included are considered to be the best available. Unfortunately, the best is all too poor and will continue to be poor until extensive research is undertaken concerning the nature of occupations and of the traits needed by individuals who enter them. This is a limitation which everyone interested in vocational counseling recognizes, Mr. Parker prominently among them. While awaiting such extensive and intensive research the present volume is a most desirable contribution to this important field of human adjustment.

W. H. COWLEY
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Responsibility for Reporting

MELVIN W. HYDE

[*Continued from page 375*]

the efficiency of the institution by giving the public the knowledge it needs in order to deal wisely and intelligently with its schools. In making this statement, the underlying assumption is, of course, that the institution is making satisfactory progress. The effect of undesirable stories on a school which is making advancement need not be greatly feared if the institution adopts a policy of honesty and frankness in telling them. Favorable stories, it is believed, will far outweigh the unfavorable.